Engineering

Volume

202

July-December 1966

Issue	Serial number	Pages
1 July	5228	1-46
8 July	5229	47-92
15 July	5230	93-134
22 July	5231	135-176
29 July	5232	177-218
5 August	5233	219-264
12 August	5234	265-306
19 August	5235	307-344
26 August	5236	345-390
2 September	5237	391-432
9 September	5238	433-478
16 September	5239	479-524
23 September	5240	525-566
30 September	5241	567-612
7 October	5242	613-654
14 October	5243	655-696
21 October	5244	697-738
28 October	5245	739-780
4 November	5246	781-826
11 November	5247	827-872
18 November	5248	873-914
25 November	5249	915-956
2 December	5250	957-998
9 December	5251	999-1040
16 December	5252	1041-1082
23 December	5253	1083-1116
30 December	5254	1117-1150

Engineering founded 1866
Published every Friday by
Engineering Ltd 36 Bedford Street
London WC2 United Kingdom
telephone COVent Garden 0641
TEMple Bar 3663
telex 261828
telegrams and cables
Engineering London Telex

Chairman
J A Dixon MA CEng

Managing Director
G H Dixon MA

Editor
F B Roberts MBE CEng

Executive Editor
D Fisher PhD BSc CEng

Deputy Editor
A A H Scott BSc CEng

Assistant Editors
K M Brown
J L Tosen
C R H Simpson
E D Holland
C J Albu BA
E J Jeffs BSc(Eng) ACGI
N E Hardy
L R Livesey
D J Sandry BSc

Art Editor
J G H Laing

Assistant
C C Riddell

Information Officer
J R Day BSc

Assistant
Barbara Goreham

Advertisement Manager
G A Roberts

© Engineering Limited 1966

Index

A

A40 road, concrete for Western Avenue extension of 576
AB Celleco, Vallvik fractionator for pulping process 496
Abarth, Fiat motor car conversions 840
  motor car developments 887
Abattoir
  Manchester
    cold store and chill rooms 69
    construction of 69
    layout and design 68
    mechanical handling 68
    refrigeration plant 69
Abbott, E. D., Ford Mk. 4 estate car 752
Abbott, M. B., on Introduction to the Method of Characteristics (book) 213
ABC Motors, metric imperial translating drum dual-reading machine tool dial 814
Abel Air demountable container 1123
Abelson & Co. (Engineers) Ltd., Stothert and Pitt tower crane 79
Abelson Motors Ltd., Abel Air demountable container 1123
Aberavon swimming pool, design and construction 109
Aberdeen University, collapse of zoology block 832
Aberfan coal tip disaster 743
  Government inquiry into 1004, 1048, 1087
Aberthaw A power station 367
Aberthaw B power station
  alternator 231
  construction progress 367
  equipment for 231
  generating sets for 368
  transformer 231
Aberthaw Fisher shallow-draught vessel for generating plant 231
Abramowitz, S., light from exploding wire 75
Abrasive, diamond, metal-clad, RDA-MC 286
Abrasive disc backing plate, Vulkofix 72
ABS plastics, electroplating of 719
Absorbit Ltd., sound absorbing blocks 682
Abwood Machine Tools Ltd., surface grinding machine 1142
Accelerator
  circular, types 472
  drift tube 477
  electron, NINA, experimental programme 1048
    Stanford University 478
  electrostatic 472
    Cockcroft-Walton 472, 473
    Van de Graaff 472, 473
  linear, advantages over circular 478
    classification 477
    NBS 1019
    principle of 478
    uses 478
  particle, classification 472
    definition 471
    Engineering Outline 471
    history 471
    operating characteristics 472
    uses 471
    Van de Graaff 471
  waveguide 477, 478
Accelerometers, in inertial navigation 85
  peizoelectric, Bell 334
Accessory Traders (Croydon) Ltd., Automac bilge level control system 1138
Accident(s)
  factory, report on 525
  propeller shaft tunnel of ship 835
  railway, in 1965, BR 1007
    in 1965, survey of 1099
  railway disasters, historic, by O. S. Nock (book) 1111
  road, spray hazards in 352
    with roadside equipment 745
  ships at sea 835
  see also Explosion; Fire
Accles & Pollock Ltd., Hypactor extrusion press for Magnox nuclear fuel cans 423
  tubing and tubular components 404
Acetic acid plant, crane for 1090
Acetylene production by Wulff process 60
Acetylene production plant, Barry, S. Wales 60
  Hull 60
  Maydown, Northern Ireland 60
  Union Carbide Corp. 61
Acid inhibitors (trade publication) 650
Acme Manufacturing Co., finishing machines (trade publication) 336
Acoustic ceiling (trade publication) 172
Acoustic noise and its control, conference on 428
Acoustics, applied underwater, by D. G. Tucker and B. K. Gazey (book) 381
Acrow Engineering Group 698
Activators and feeders, bin, for difficult materials, Vibra Screw 939
Activ-V activated carbon air filter 166
Acton Society Trust, survey into effect on workers by mergers 219
Acton, W. I., noise from pump motors 640
Actuator(s)
  electro-thermal, Smiths 72
  hydraulic, Lockheed Precision Products Ltd. 159
  pneumatic, for quarter turn operation valves, Audco 991
  valve, electric, Zero Four 1073
Ad Auriema, temperature indicating controller 907
Adam, H., on Transactions of the Third International Vacuum Congress (book) 427
Adamek, R., Loughborough University 100
Adams, J. B., appointment to Advisory Council on Technology 348
  appointment to United Kingdom Atomic Energy Authority 348
Adams and Westlake, mercury wetted relays 375
ADAP thyristor controlled speed control and light dimmer 463
Add-a-Vision television monitoring equipment 988
Adder, computing amplifier as 694
Addison, H., on Centrifugal and other Rotodynamic Pumps (book) 129
Addressograph-Multigraph Ltd., Bruning 2000 electrostatic copying machine 597
Adhesive, for cartons using polypropylene laminated films 1138
  for metals, Polikon 25
ADM Business Systems Ltd., electrostatic copier 251
Admiralty Compass Observatory (Slough), research laboratories 145
Admiralty Research Laboratory, modulation scanning technique 805
Adour RB172/T260 supersonic turbofan aircraft engine 491
Adsil-Two silicone release agent 331
Advance(s) in machine tool design and research, by S. A. Tobias and F. Koenigsberger (book) 213
Advance(s) in materials, by P. A. Rottenburg (book) 83
Advance Plastic Products Ltd., foam products (trade publication) 214
Advanced electrical power and machines, by G. S. Brosan and J. T. Hayden (book) 649
Advanced gas cooled nuclear reactor. *See* Nuclear reactor
Advanced mechanism, by J. S. Beggs (book) 213
Advanced studies in electrical power system design, by R. A. Hore (book) 36
Advertising, television, small control gear, AEI 783
AEI. *See* Associated Electrical Industries Ltd.
AEI-Birlec Ltd., heating furnace 601
  Ungsbolaget fuel-fired walking-beam furnaces 859
AEI Electronics
  FV82 voltage regulator with thyristor control 333
  Logicon switching system for crusher plant 1105
  potentiometric chart recorder 332
  rotatable cable and hose connector 424
  surge counter 291
AEI Lamp & Lighting Co. Ltd., control gear integrated lamp fitting 689
Aerex Ltd., axial-flow fans 900
  portable air blower 126
Aerial(s), high, passenger hoists for 832
  Intelsat satellite requirements 933
  microwave, testing station for, GEC 169
Aerojet-General Co., SVM-1 hydrogen peroxide-fuelled apogee motor 935
Aeronautical and space equipment (trade publication) 336
Aeronautical technical dictionary, by H. W. Groves (book) 381
Aeroplane, anatomy of, by D. Stinton (book) 951
Aerostyle Ltd., Mettastatic electrostatic spray gun 945
Aerovox Corp., ceramic capacitors 1029
AFA Group, fire extinguishers (trade publication) 562
AGEC of Belgium, traffic control systems 525
Ages of science, by C. A. Ronan (book) 691
Agesta nuclear reactor, plutonium fuel element experiments 169
Aggregate, concrete. *See* Concrete
Agitators, treble-cluster vertical, Black-Clawson 496
Agricultural engineer(s), degree status for 267
Agricultural engineering, symposium on 84
Agricultural machinery, exhibits at Royal Show 146, 1052
Agriculture, automation in 1052
  see also Farm; Tractor
Ahrens, Josef, roll forming machines 1075
Ailsa Shipbuilding Co. Ltd., *Aberthaw Fisher* shallow-draught vessel for generating plant 231
Air, compressed. *See* Compressed air
Air-blast heater, furnace, Imperial Smelting 299
Air blowers for cigarette inspection machines, Plannair 375
  portable, Aerex Ltd. 126
Air compressor. *See* Compressor
Air conditioning, spray painting shop, BR Shildon 296
Air-conditioning equipment in cargo ships 1011, 1014
Air-conditioning system, Concorde airliner 321

in textile factory at Tongaat 938
Rhomboidal air controller 289
Air-conditioning system analyser 512
Air-conditioning units, testing in house on factory roof 620
Air filter, Airvent 1028
Air freight export containers 788
Air freight loading system, Skydel 442
Air gauging for grinding of ball bearings 326
Air heater. *See* Heater
Air knife, USI 945
Air/land aircraft module link project 276
Air operated valves (trade publication) 864
Air pollution. *See* Pollution; Smoke; Clean air
Air ring, tubular film extrusion, Modern Plastic 376
Air Scribe scribing tool 300
Air separator for cleaning granular products, Gunson's 1030
Air traffic control by computer 228
Air traffic control systems, conference on IEE 302
Air transport, marketing management in, by J. L. Grumbridge (book) 1035
Aircraft
air/land, module link project 276
airframe testing programme, Concorde airliner 321
anatomy of the aeroplane, by D. Stinton (book) 951
balancing freight in 600
Bassett executive, Beagle 445
Belfast military freighter 445
blind land-navigation aid, Arma-Brown gyro compass 405
Boeing 707 airliners, curing system for sealant 311
Boeing 747 jet, British Overseas Airways Corp. to buy 265
Boeing 2707 supersonic airliner 660
Buccaneer naval strike 445
Cessna 1967 model-150 353
Concorde supersonic airliner
air-conditioning generation systems 321
airframe testing programme 321
Anglo-French collaboration, Sir George Edwards 540
anti-icing equipment 321
construction methods 318
cost analysis 480
design and construction review 316
design philosophy 316
economics 322
electrical system 321
engine control system for BS593 Olympus engine powering, Ultra 405
flight control system 321
flight deck layout 321
for Middle East Airlines 1002
fuel system 321
hydraulic system 321
manufacture of radome 897
manufacturing breakdown and production-line time chart 317
navigation system 321
performance requirements 322
power plant details 321
production methods 319
structural design and materials 316
Corsair II, Spey engine for 227
Douglas DC-8 Super-62 440
exhibits at Farnborough Show 443
F-104 fighter, grounding of Federal German version 1047
fighter, McDonnell Phanton, British equipment for 745
flight control system equipment, Smiths 405
Gannet, underwater ejection system in, Westlands 787
hangar at Brize Norton 968
HP137 Jetstream 403, 445
HS125 twin-jet executive 445
HS748 transport 445
HS801 maritime patrol 445
fuselage transport problem 1122
hypersonic airliners, R.R. Jamieson 540
instrument panels in, lighting of 43
Islander, Britten-Norman, Government finance for 481
light transport 445
Jaguar strike trainer 443
Janes's all the world's, 1966–67, by J. W. R. Taylor (book) 1145
Jetstream, Handley-Page, Government finance for 481
landing system, STAN 37/38/39 all-weather 460
lightning, English Electric 443
Lockheed L-2000-7 supersonic airliners 660
long-range-jet, economy of 617
NASA HL-10 lifting body 540
One-Eleven airliner 443
order for, BEA 1084
Skyvan turboprop utility/transport 445
Starfighter fighter, grounding of 1047
supersonic airliners, comparison of British and US 660
tilting rotor concept for VTOL transports 881
Trident three-jet civil transport 445
TSR-2, murder of, by S. Hastings (book) 951
Vanguard airliner delays, BEA 94
variable sweep strike 445
VC10 airliner revenue analysis 745
VC10 jet transport 443
Victor B Mk. 2 strategic reconnaissance 63
Westland WE-01 and WE-02 transport 881
see also Aeronautical; Aviation; Airport
Aircraft engine
Adour RB172/T260 supersonic turbofan 491
control system for BS593 Olympus engine powering Concorde supersonic airliner, Ultra 405
exhibits at Farnborough Show 491
gas turbine, committee to coordinate policy 436
Rolls Royce position and prospects 106
M45 turbofan 491
Olympus 593B turbo-jet for Concorde airliner 321
quieter, F. B. Greatrex 540
RB153 gas-turbine, Rolls-Royce 107
RB162 lift jets, Rolls-Royce 107
RB172/T 260 turbofan, Rolls-Royce, 107
RB178 turbofan, Rolls-Royce 106, 540, 961
RB193 gas-turbine, Rolls-Royce 107
RT172 gas-turbine, Rolls-Royce 107
Spey turbofan for Corsair II aircraft 227
Spey 506 turbofan, Rolls-Royce 107
Trent turbofan, Rolls-Royce 491
Viper 600 turbojet 354
Viper turbojet engine production history 1121
Wolston TP90 turboprop, Rover 491
Aircraft industry, position and prospects of 443
United States, effect of Vietnam war 1002
Aircraft integrated data recording system, Midas 404
Aircraft landing aid, hologram as 804
Aircraft landing mats, floating, aluminium panels for 9
Aircraft-Marine Products (GB) Ltd., edge connectors for printed circuit boards 290
Aircraft noise, International Conference on (London) 961, 1001
Aircraft sealant, curing system for 311
Aircraft transceiver, air/ground, Sky 505 vhf 405
Aireworth up-cutting bar shearing machine 254
Airfield runway, sampling with core drill 1135
Airframe testing programme, Concorde airliner 321
Airmaster Engineering Ltd., Airvent air filter 1028
Airpax Electronics Ltd., electromagnetic pick-up 991
zero speed switch 249
Airport, La Guardia, runway extension over water 881
London (Heathrow)
category II landing equipment 460
new cargo terminal 834
noise abatement arrangements 961
Airport terminal buildings, design. *Letter* 355
Airtube conveyor systems (trade publication) 994
Airvent air filter 1028
Aitken, I.M.E., Western Europe's biggest hangar 1090
Aladdin Industries Ltd., vacuum flask casings, production of 939
Alarm, dry battery site, Stellar 249
Alarm annunciator system, Labelarm 289
Alarm bells and hooters, Londex 858
Alarm system for Mersey Tunnel 230
Albu, A., advantages of EDC 742
Alcan Industries Ltd., aluminium welding (trade publication) 864
pulse arc welding of aluminium barrels 852
Alexander, George H., Machinery Ltd., Kennametal carbide tooling 723
Alexandra Overalls, overalls (trade publication) 130
Alfa-Laval Co. Ltd., Ramen Lamella heat exchanger 729
Alfred, F. C., Loughborough University seminars 99
Alimak, Scando hoist system for construction sites 721
Alkali resistance test, porcelain enamel 285
Allam, E. P., Ltd., Amp Champ portable generator 1050
Diesel Minigen portable diesel generator 298
industrial vibrators and materials handling 78
portable floodlights 809
Allan, B. J., award by Institution of Civil Engineers 434
Allen, C. J., on London and North Eastern Railway (book) 951
Allen, John, & Sons (Oxford) Ltd., Landraner drain laying machine 576
truck mounted cranes 80
Allen, P. H. G., image of engineer 969
Allen Transmatic Ltd., Jumbo Transfil Model At 8 powder filling system, large bulk containers 425
Allen, W. H., Sons & Co. Ltd., Grafham Water reservoir 154
pumps (trade publication) 692
Allen Ygnis Boilers Ltd., packaged boilers (trade publication) 470
Alley Compressors Ltd., compressors (trade publication) 38
two crank compressor 557
Allibone, T. E., careers in Information Science 482
Allis-Chalmers grain drill 1053
Allman, E. & Co., blow-moulded spray tank 948
Intaro tractor-mounted Vibrajet nozzle 792
Allmänna Svenska Elektriska Aktiebolaget. *See* ASEA
Allmet, grain drying plant 1053
Alloys, ferrous, technology and properties of, for high-temperature use, by M. G. Gemmill (book) 301
see also under specific alloy types
Allplas plastic balls for smell elimination 275
Allsop, W. J., & Son Ltd., Warner SF400 electro-sheave clutch for refrigerated motor vehicles 897–898
All-Square pneumatic cylinder, Maxam Power Ltd. 205, 1133
Almondsbury interchange 275
composite construction in, D. S. Bondale and P. J. Clark 678
Alpha particles in radioisotope instruments 384
Alternator(s)
Aberthaw B power station 231
cargo ships 1012
Cruachan pumped storage plant, Boving & Co. Ltd. 1018
design trends 237
diesel, Johnson Machinery 1110
see also Generator
Alton instrument cases 606
Alumasc Ltd., pulse arc welding of aluminium barrels 852
Alumin Building Components Ltd., floating hotel and office block, Amsterdam 920–921
rooflight (trade publication) 776
Alumina ceramics (trade publication) 650
Alumina tubes, Purox 991
Aluminium
coloured (trade publication) 214
jointing of electrical 293
pre-painted (trade publication) 382
pulse arc welding (PIG) 36
Aluminium alloy, work wagon in 1143
Aluminium barrels, pulse arc welding of 852
Aluminium brass, Yorcalbro' 158. *Correction* 511
Aluminium cables, production of, BICC 188
Aluminium Co. of America, aluminium land yacht 104
aluminium tube for force feeding weightless fuel 1023
floating landing mats 9
Utility Kart battery vehicle 54
Aluminium containers, Multiload 940
Aluminium Corp. Ltd., strip rolling mill with automatic gap control 645
Aluminium electrical wiring cables, position and prospects of 293
Aluminium Federation, aluminium electrical wires 293
annual luncheon (London) 742
Aluminium filler wire (trade publication) 562
Aluminium Laboratories Ltd., aluminium electrical wires 293
pulse arc welding, of aluminium 36
of aluminium barrels 852

Aluminium land yacht 104
Aluminium louvres, external, Trox 425
Aluminium panels for floating landing mats 9
Aluminium plant modernization and expansion at Waunarlwydd 645
Aluminium sheet production at Dolgarrog 646
Aluminium sheeting, Classic pressed 495
Aluminium strip, coiled, cut-to-length line for, Humphris 987
Aluminium tanks for polyethylene pellets 731
Aluminium tube for force feeding weightless fuel 1023
Aluminium welding (trade publication) 864
Alvan Blanch, grain drying plant 1053
Alvsborg suspension bridge, Sweden 967
Amalgamated Dental Group, Satellite dental instrument carrier 485
Ambassador tubeless packaged hot water and steam boilers (trade publication) 516
Ambergate electronic telephone exchange 1056, 1088
Ambrose, E. R., on Heat Pumps and Electric Heating (book) 83
Ambuco Ltd., dust abatement and recovery cyclones 688
Amer, D. F., CIGRÉ conference 16
America. *See* Latin America; United States
American Car & Foundry Co., thermographic examination of foam insulation 128
American Electric Power Co., 765kV proposals 16
American Institute of Aeronautics and Astronautics, thermophysics specialist conference (New Orleans) 428
American-Lincoln Model 130 pedestrian-controlled scarifier 725
American Motors Rambler, Rebel series motor car 664
American Nuclear Society, conferences (Washington) 1078
American Road Equipment Co., Econmobile hydraulic loader 298
American Society of Mechanical Engineers, gas turbine conference 864
magnetic levitation for railway trains 1123
meeting on corrosion in furnaces 1064
American Society for Metals, Introduction to Stainless Steel, by J. G. Parr and A. Hanson (book) 335
American Society for Testing and Materials, annual meeting 246
publications 301
American Welding Society, Welding Handbook, by A. L. Phillips (book) 951
Ames Crosta Mills & Co. Ltd., Shallomatic process screening unit 212
AMF Thermatool Incorporated, hf pipe welding machine 297
Amoco Group, drilling rig *Orion* 3, 1088
Amp Champ portable generator 1050
Amphenol Ltd., Astro-348 series environmental electrical connectors 403
Amplifier(s)
audio, Westinghouse 250
computing 694
dc, Bell & Howell Ltd. 162
differential dc, Epsylon 553
for undersea telephone cable 76
in analogue computer 694
multi-channel, SE Labs 250
planar turbulence, Maxam 1133
solid-state, Keighley 161
Amplifier unit, audio, Mullard 647
Amplitude gratings 912
Amsterdam, floating hotel and office block 920–921
North Sea Canal, Coen Tunnel road crossing for 10
Analogue computer. *See* Computer(s)
Analogue information, quantisation of 325
Analyser, Dynacarb, for carbon in steel 600
oxygen, Leco, use in vacuum degassing plate steels 983
signal, transient 985
Analysis, by X-ray fluorescence spectrometry 389
measurement and, of random data, by J. S. Bendat and A. G. Piersol (book) 171
structural, iterative methods in, by S. Blaszkowiak and Z. Kaczkowski (book) 1077
matrices for, by S. J. McMinn (book) 817
Analysis service for power systems, AEI 169
Anatomy of the aeroplane, by D. Stinton (book) 951
Anchor, Danforth Mk. 111 158
Andermann and Ryder Ltd., alumina ceramics (trade publication) 650
Anderson, D., early Severn Bridge scheme 450
Anderston Clyde Engineers Ltd., container handling equipment 209, 703
Andrew Laing Lecture. *See* North East Coast Institution of Engineers and Shipbuilders
Andrews-Weatherfoil, oil fired district heating for Highland Holiday Centre, Aviemore 922
Andronov, A. A., on Theory of Oscillators (book) 37
Angelery hot water generator 768
Anglian Development Ltd., Hy-Foil runabout hydrofoil boat 1091
Annand, W. J. D. on Mechanics of Machines (book) 171
Annealing, open-coil, Lee Wilson plant 1108
Annealing furnaces, Fukuyama steelworks 490
Anson, D., model tests on furnaces 807
Anson, George, & Co. Ltd., Anson Universal Minolta Fax 41 electrostatic document copier 328
copying machines 598
Anson Universal Minolta Fax 41 electrostatic document copier 328
Antennae, space, extending booms for 247
Anti-corrosion service (trade publication) 776
Anti-corrosive treatment, steel fabrication and 1025
Antifoam agents 339
Anti-submarine warfare attack trainer, computer-controlled, Honeywell 743
Antler Ltd., indestructable suitcases 484
Apex Construction Ltd., Y-cone powder blending machines 513
Appels, J. Th., on Handbook of Relay Switching Techniques (book) 607
Appleby-Frodingham Steel Co., load cell weighbridge 242
vacuum degassing plant for plate steels 983
Application of fracture toughness parameters to structural metals by H. D. Greenberg (book) 733
Application of power capacitors (book) 171
Applications Technology Satellite. *See* ATS
Applied climatology: an introduction, by J. F. Griffiths (book) 255
Applied mechanics, by H. Gottler (book) 335
Applied queueing theory, by A. M. Lee (book) 171
Applied science in schools, conference on 4
note on 1
Applied underwater acoustics, by D. G. Tucker and B. K. Gazey (book) 381
Apprentice(s), attitude training of 1045
Apprentice training, at group training centre 962
Colchester Lathe Co. Ltd. 1003
Steel, Peech and Tozer 1003
Approaching automation, expositions held, Ministry of Technology 568
APT Electronic Industries Ltd., Lektrokit chassis construction system for circuits 1072
rack system (trade publication) 470
Aqua 1 water purifier 1074
Aqua-Sensor water softeners 1074
Aquifers, artificial recharge of 282
Aquitane-Fisons, glass-filled Rilsan Nylon-11 163
Arc-drawing rule, Arc Rule 421
Arc Rule arc-drawing rule 421
Arc welding. *See* Welding
Arch, W. H., steelwork fabrication and maintenance 679
ARCH 2000 digital computer 815
ARCH 9000 computer to control X-ray diffractometers, Elliott 29
Archangel, satellite launching site 1117
Archer, L. B., is our face red? 272
telephone kiosk of new design 187. *Correction* 272
Architects and Industrialized Housing, conference on 864
naval. *See* Naval architect
on their metal, by M. Ryan 680
Arcmaster lightweight portable welding screen (trade publication) 734
Arcory Products Ltd., power tools (trade publication) 256
Argenterio loader/digger 146
Argon laser, SERL 769
Argonarc welding of heating elements 29
Argonne National Laboratory, chemical properties of astatine 29
Argus digital computer input/output equipment 1141
Arkes automatic helmsman 1011
Arma Brown gyro compass 1011
blind land-navigation aid 405
Armalock self-locking nut (trade publication) 1036
Armco-Pittsburgh SA, copper-coated steel strip 908
Armerad Betong, Alvsborg suspension bridge 967
Armstrong Patents Co. Ltd., self-locking nut (trade publication) 1036
Armstrong Whitworth (Metal Industries) Ltd., austenitic spheroidal graphite cast iron propeller 158
Danforth Mk. III anchor 158
drum washing plant 513
Kue-Ken jaw-type rock crusher 642
Armytage, W. H. G. on Social History of Engineering (book) 171
Arnold Group, steel fabrication and anti-corrosive treatment 1025
Arpet gas discoveries in North Sea 706
Arroll, Sir William, & Co., crane for acetic acid plant 1090
Severn Suspension Bridge 456
Art(s) and science course, combined, Newcastle upon Tyne University 220
Arthur D. Little Research Institute, fresh water from the sea 189
Artificial intelligence techniques, by E. B. Carne (book) 255
Artificial intelligence through simulated evolution, by L. J. Fogel, A. J. Owens and M. J. Walsh (book) 909
Artificial joint, Osborne/Ball jig-loaded Osteotomy Plate 661
Artz, F. B., on Development of Technical Education in France: 1500–1850 (book) 1111
Arup, Ove, Associates, Loughborough University 97
Arup, Ove, & Partners, two-level roadway for Gateshead 311
Asbestos cement pressure pipe, Everite 856
Ascension Island ground terminal 937
Asdic echo-sounding technique 303
ASEA, dc power transmission lines 1094
fluid extrusion techniques 766
high-pressure forming techniques 765
high voltage dc power transmission projects 546
isostatic compression techniques 766
Quintus 5,000 ton hydraulic press 765
valves for power transmission line to Sardinia 1097
ASEA (Great Britain) Ltd., torquemeter 160
Ashton Containers Ltd., load cell weighbridge 242
Ashworth, E. & A., dormant weighing machine 497
Aslib, annual dinner-agm 37
conference on classification, coding and group technology 1036
Engineering Group meeting (Birmingham) 607, 608
Engineering Group one-day conference 1077
Engineering Group secretary 301
Asphalt, Marshall, sampling with core drill 1135
Asphalt balance to measure rate of spread, Wykeham Farrance 605
Asphalt cutting machine, Errut 605
Asphalt plant, mobile, Parker 637
Asquith horizontal drilling machine, numerically controlled (trade publication) 38
Assembling, automated, discussion on, IPE 692
Associated Bridge Builders Ltd., Severn Suspension Bridge 454,456
Associated Electrical Industries Heating Ltd., furnace air-blast heater 299
Associated Electrical Industries Ltd.
alternator for Aberthaw B power station 231
analysis service for power systems 169
automated germanium diode assembly 899
cold-forming large section plate 369
computers in mines 397
control equipment for Cunard Q4 liner 11
COSAG propulsion machinery for Type 82 destroyer 661
electric locomotives for Pakistan 56
export orders for motive power 662
factories for production of telephone equipment 984
flameproof tachometer-generator 1139
Froriep D850 IV mill-roll lathe 1068
generating sets for Aberthaw B power station 368
logicon static switching equipment 285
marine control showroom in London 11
milling machine for keyways on turbine diaphragm 764

profile analyser 175
railway electrification in Pakistan 56
railway rolling stock for Glasgow electrification scheme 896
small control gear television advertising 783
Victoria line traction equipment 1134
see also AEI
Associated Engineering Ltd., fuel-injection system for petrol engines 582
Associated Heat Services Ltd., formation of 784
Associated Industrial Consultants Ltd., survey of ICE corporate members 785, 786
Associated Shipbuilders Ltd., activities of 534
Type 82 guided-missile destroyer 661
Association of Consulting Engineers, Lofthouse report 6
Association of Engineering Distributors, annual report of 830
Association France-Grande Bretagne 1119
Association of Optical Practitioners, light and sight in industry 1048
Association of Public Lighting Engineers, annual conference 619
Association of Teachers of Supervisory Studies, formation and activities 139
Astatine, chemical properties of 29
Aston Martin, modified DB6 motor car 665
Astro-348 series environmental electrical connectors 403
Astro-tracker alignment in inertial navigation 90
Astronautical Congress, International (Madrid) 704
Astronomical satellite, payload for, ESRO 314
Ateliers de Constructions Electriques de Charleroi SA, closed circuit television 579
Atkins, W. S., & Partners, Wiggins Teape paper mills, Fort William 495
Atkinson Vehicles Ltd., six wheeled freighter tanker chassis 506
Atlas Copco (Great Britain) Ltd., engine room crane 158
oil-free rotary-screw compressor 987
Atlas-MaK Maschinenbau GmbH, mast cranes for handling containerized cargo 938
Atlas-Warner, Super 66 portable slide viewer 833
Atmospheric pollution. *See* Pollution; Smoke; Clean Air
Atomic energy. *See* Nuclear energy
Atomic Energy of Canada Ltd., nuclear radiation units for India 55
start-up of ZEEP nuclear reactor 101
Atomic Energy Research Establishment, Elliott ARCH 9000 on-line computer to control X-ray diffractometers 29
reactor development review 669
variable-energy cyclotron 949
Atomic Industrial Forum Inc., conferences (Washington) 1078
Atomic power. *See* Nuclear power
Atomic Power Constructions Ltd., Dungeness B nuclear power station 64
gas-cooled nuclear reactor for Dungeness B nuclear power station 656
Atomic power station. *See* Nuclear power station
Atomic reactor. *See* Nuclear reactor
Atomic Weapons Research Establishment, Petrel research rocket 458
Atomics International Inc., diamond blades for cutting uranium carbide 1025
superconducting cable 718
ATS-1 satellite, weather patterns observation 1118
Audaheat space heater 553
Audax Ltd., Audaheat space heater 553
Audax trolley and track system 254
tipping skips 211
Audax trolley and track system 254
Audco Ltd., pneumatic actuators for quarter turn operation valves 991
Audio amplifier, Mullard 647
Westinghouse 250
Augur boring rig, hydraulic, MacAlpine 946
Auriema, Ad, temperature indicating controller 907
Austenitic stainless steel (trade publication) 336
Austin-Smith/Salmon/Lord Partnership, proposals for expansion of Warrington 309
Austin, Stephen, & Sons Ltd., fluidic devices, reduction in manufacturing costs 1065
Australia, microwave communications system 313
Australian Atomic Energy Commission, symposium on movement of granular material and structure 1078
Australian and New Zealand Association for the Advancement of Science, Melbourne Congress 214
Autex Ltd., Planocop offset litho plate machine 298
Auto Diesels Ltd., Mark 12A Stad jet air starter 901
Saurer auxiliary power unit 404
Autoclave (trade publication) 302
Autoflame soldering and brazing machines 644
Autofoto process for metal labels 1135
Automac bilge level control system 1138
Automated assembling, discussion on, IPE 692
Automated limit switch, Edytect Switch 425
Automatic control. *See* Control
Automatic Equipment Ltd., dip coating painting plant 809
Automatic operation and control of broadcasting equipment, conference on 884
Automatic positional control for plate rolling mill 640
Automatic Pressings Ltd., Speedy timber joist hanger 375
Automatics, Hestika range 210
Automation
agriculture 1052
and advanced technology, employment problems of: internal perspective, by J. Stieber (book) 83
approaching, expositions held, Ministry of Technology 568
cargo ships 1011
films on, Ministry of Technology 529
low-cost, courses in, PERA 568
measurement and, Mesucora 67, exhibition on 38
naval vessels 11
ships 1023
position and prospects of 11
small manufacturer 529
zinc production in ISF process 815
Automation Ltd., Power-Draw wiredrawing machines 514
wire stripper and cutting machine (trade publication) 1078
Automobile. *See* Motor car
Automotive Products Group, exhibits at Fluid Power Exhibition 560
hydraulic actuators 159
AVCO-Everett Mark V MHD power generation 105
Avdel Ltd., air-operated screwdriver 1144
Aveling-Barford Ltd., road rollers (trade publication) 172
Avery, W. & T. Ltd., automatic mixing and weighing system at Bugbrooke Mill 1066
load cell weighbridges 241
load cell weighing (trade publication) 776
Aviation: creative ideas, by O. Stewart (book) 255
Avon Rubber Co., tyres in safe motoring (trade publication) 428
Axle unit, Hydro-stabil 558
Azimuth alignment in inertial navigation 89
Aztec Engineering Ltd., Mota self-actuated mixers 901

B

Babcock & Wilcox Ltd., boiler installation, Wiggins Teape, Fort William 498
Hutter process of boiler cleaning 458
Babtie, Shaw & Morton, slip form road paving unit 396
Backing plate, abrasive disc, Vulkofix 72
Backscatter gauges 385
bulk density measurement by 388
thickness measurement by 387
Badges, nameplates and (trade publication) 562
Bagalle mouldable plastics 1106
Bagasse Products Co. Ltd., Bagalle and Bellamine mouldable materials 1106
Bagley, D. E., Information Scientists' conference 140
Bailey, Sir W. H., & Co. Ltd., turnstile for limited spaces 1143
Baird Television, activities of 446
colour television production preparations 446
Baker, J. W., spraying of plastics 1026
Baker, S. G., computer program for turbine blade temperature 1070
Balance of payments, future of 345
Balancing device, portable dynamic, Reutlinger 211
Balancing tests, UK3 satellite 599
Baldwin Fluid Power Ltd., Continental Hydraulics range of valves and cylinders 560
diaphragm operated valve 463
thumb-button operated valve of ¼ in. bore 690
Bale-handling elevator, Rapide 147
Balency-system houses for Woolwich-Erith project 832
Balfour Beatty & Co. Ltd., supergrid power lines in disused railway tunnels 1124
Balfour, D. M., Lofthouse report 6
Balfour, Henry & Co. Ltd., chlorine dioxide plant for Wiggins Teape 810
wood-chip digesters 811
Balfour-Scott digesters 496
Ball(s), plastic, Allplas, for smell elimination 275
Ball bearings. *See* Bearings
Ball, K., industry and university collaboration 53
Osborne/Ball osteotomy plate 662
Ball, L., film loop instruction courses 662
Ballvalve in fluidics 565
BAMCU moisture control unit 1053
Bamford, J. C. (Excavators) Ltd., crawler excavators 126
Bamfords Ltd., fully-reciprocating mower 147
Band saw. *See* Saw; Sawing
Bang & Olufsen, radio and recording equipment 395
Banknote counting machine, De La Rue 253
Bannister, A., on Surveying (book) 37
Bantam speed reducers 989
Bar automatic lathe (trade publication) 1112
Bar cutting machine, Bimax 465
Bar shearing machine, up-cutting, Aireworth 254
Barber Colman temperature indicating controller 907
Bardic Ltd., battery powered fluorescent lamp 126
Barge, hopper, detachable self-propelled 622
Barge systems, container 925
Barker, G., charter for staff unions 435
Barnacle, H. E., on Mechanics of Machines (Vol. 2) (book) 213
Barnes Engineering Co., thermographic examination of foam insulation 128
Barnes, J. A., and J. Murdoch, basic statistics 271
Barnes, K. K., on Soil and Water Conservation Engineering (book) 515
Barnes, W. H. F., industry and university collaboration 52
Barnesdril honing machine (trade publication) 562
Barraclough, D. R., BACIE annual conference 572
Barrage, estuary, and water supply problems 281
Barrels, aluminium, pulse arc welding of 852
Barrett, R. E., oxidation of sulphur dioxide 1064
Barrier, traffic, electrically operated, Machinefabriek 1032
Barron & Shepherd Ltd., goods elevator 167
Barwell, D. R. M., container ships 441
Basic automatic control theory, by G. J. Murphy (book) 817
Basic engineering thermodynamics, by R. Joel (book) 817
Basic statistics, by J. Murdoch and J. A. Barnes 271
Basic theory of structures, by J. S. C. Browne (book) 469
Basically branching, by D. Rowntree (book) 515
Basler, K., on Torsion (book) 691
Bassett executive aircraft, Beagle 445
Batch counter, Radiatron 1072
Batchelor, J. H., on Synchro Engineering Handbook (book) 171
Battelle Laboratories, fluidized beds for freeze drying of foodstuffs 852
Battelle Memorial Institute, corrosion of steel in concrete 850
Battelle Research Centre, plastics for motor car industry 922
Battery, dry, site alarm, Stellar 249
manganese dioxide, centenary of 1136
see also Cell
Battery charger, MilliQ 249
Battery construction, materials, techniques and testing, Vidor 1136
Battery driven motor car, Electrovair-11 927
position and prospects of 744
Battery driven motor vehicles, booster unit for 930
Battery factory for Bulgaria, Vidor 1136
Battery operated mail delivery vehicle 229
Battery production, Crompton Parkinson 897
Bawn, member of Computer Board for Universities and Research Councils 348
Bayliss, Jones & Bayliss Ltd., guard railing (trade publication) 910
BC Timber Frame Housing Group, roof trusses (trade publication) 172
Beacon, flashing, Comet 1110

Beagle Aircraft, Bassett executive aircraft 445
Beams, and slabs, structural analysis of, by J. Hahn (book) 691
bridge, Netherlands Delta Plan 115
castellated (trade publication) 172
composite, continuous, R. P. Johnson, K. van Dalen and A. R. Kemp 677
or jet deflection amplifiers 564
Preflex, Boulton and Paul 578
Bearings, ball, air gauging for grinding of 326
bridge, SG iron 120
Tetron ptfe 717
trade publication 428, 734
spiral groove, by E. A. Muijderman (book) 607
thrust, one-piece cage, INA 333
trade publication 994
Bearing applications, specialized (trade publication) 382
Bearing assemblies, hanger, Morganite 905
Bearing assembly machine, automatic, Hoffman 369
Bearing failure, wire-wool 630
Bearing housings, metal spraying of 286
Bearing performance, meeting on, British Gear Manufacturers Association 852
Beatty, W. F., Euston main line electrification 795
Beaulieu Palace House, auction of vintage motor cars 103
Beckman & Whitley Inc., image converter camera 857
Bedford County Hall, faulty structural principles in 434
Bedford KM range of truck chassis 505
Beer, J. M., model tests on furnace performance 806
Beer meter, push-button, Gaskell and Chambers 284. *Letter* 398
Beer, S., Loughborough University seminars 99
scientific management activities 4
Beggs, J. S., on Advanced Mechanism (book) 213
BEL electronic music board 619
Belfast military freighter aircraft 445
Belgium, bridge collapse at Pulle 880
Bell Aerosystems, Lunar Orbiter spacecraft 1128
Bell Captain coinless dispenser and refrigerator vending machine 880
Bell & Howell Ltd., dc amplifier 162
electromanometer 120
magnetic tape system 378
piezoelectric accelerometer 334
Bell Rocket Belt rocket-propelled belt 143
Bell Telephone Laboratories, gunn-effect oscillators 372
high frequency transistors 980
seals for semiconductors 1134
SF system undersea telephone cable 76. *Letter* 355
Bellamine mouldable plastics 1106
Bellows, trade publication 864
Bellows Valvair Ltd., drill press feed 426
Hydrocheck hydraulic checking units 333
Belstead, proposed expansion 480
Belt(s), drive (trade publication) 994
rocket-propelled, Bell Rocket Belt 143
Belting material, Stephens Belting 990
Bendat, J. S., on Measurement and Analysis of Random Data (book) 171
Benders, hydraulic (trade publication) 84
Bendix Corp., Proficorder profile recorder 78
Bendix Electronics, BEL electronic music board 619
Bendix LT and LA automatic washing machines 198
Benjamin, B. S., prefabricated plastic roof 718
Benn, A. Wedgwood, appointment as Minister of Technology 47
Committee on Tribology 567
engineers and society 919. *Letter* 1006
exhibition, Engineer's Day 96
MIRA annual lunch 1000
Bennett, F. E., flame-retardant polyester resins 1062
Bennett, J., vacuum metallizing 1026
Bennett, R., fishing vessels and their machinery 834
Bensen, H., chairman of Development Co-ordinating Committee, BISF 177
Bensen Report on steel industry 177
Bentall, E. H., BAMCU moisture control 1053
Benzene plant at Immingham refinery 278
BEPO nuclear reactor, development review 669
Berk Building Finishes, building finishes (trade publication) 172
Berk-Gatty system pneumatic conveyor 808
Berk Ltd., Berk-Gatty system pneumatic conveyor 808
Graco Vis-Con paint heater and modulating controllers 327
Meerschaum improvement of vitreous enamels 682
Wargonin concrete additive 813
Berkely Nuclear Laboratories 671
Berlincourt, T. G., superconducting cable 718
Berry Wiggins & Co. Ltd., Kingsnorth refinery insulating pipes 418
Berths, end-loading, for Hull docks 227
Beta particles in radioisotope instruments 383
Betatron, definition 472
description of 477
uses 477
Bettinson, P. B., & Co., Argenterio loader/digger 146
Bevercoates colliery, delay in automated production 616
use of computers 397
BFI Electronics Ltd., closely controlled soldering system 1066
BHI foot and palm operated switches 606
Bibliography of British railway history, by G. Ottley (book) 561
BIC Construction, railway electrification in Pakistan 56
BICC-Burndy Ltd., power-operated compression tools 379
Bicycle
Junior 1970, Lines Bros. 14
Moulton, in bad weather. *Letter* 101
Moulton Mini 14
Moulton Mini Automatic 14
Moulton Stowaway 14
see also International Cycle and Motor Cycle Show
Bicycle sales position and prospects 923
Big Ben oilfield truck 506
Big Chief Triaxle tipper 507
Bilge level control system, Automac 1138
Billets, sawing machine for, Wessex 1142
Billingham refinery, opening of 620
Billington, N. S., intermittent heating 600
Bimat film processing method, Kodak 1131
Bimax bar and tube cutting machine 465
Bin(s), level indication, Bin-Dex 898
Bin activators and feeders for difficult materials, Vibra Screw 939
Bin-Dex level indication in bins or silos 898
Binary-decimal converter, Ether Engineering 730
Bingen, Sir Eric, on Remploy 916
Binnie and Partners, Grafham Water reservoir 152
water resources of the Great Ouse Basin 280
Biology and Medicine, Engineering in, conference on 130
Bio-physics, nonequilibrium thermodynamics in, by A. Katchalsky and P. F. Curran (book) 213
Birchon, D. silicon nitride 554
Bird flight, study of, Loughborough 1046
Bird, M., air/land aircraft module link project 276
Birds Eye Foods Ltd., Cosiclad chimney 103
Birfield Machine Tools Ltd., automatic bar feeding magazines (trade publication) 336
Birkett, Samuel, Ltd., high lift safety valve 26
Birmetals Ltd., magnesium alloys 424
Birmingham Five Ways Underpass 508
Birmingham Museum of Science and Industry 842
Birmingham New Street station, ventilation of 880–881
Birmingham University, Department of Engineering Production at, new building for 179
Bishop, Sir Harold, IEETE annual dinner 698
Biswas, A. K., feasibility of nuclear blasting 623
Bitumen refinery, Eastham 683
tanks for 683
Bitumen storage tank, Cartematic 855
Bizzarrini motor cars 887
Black Arrow satellite launch vehicle engines, Bristol Siddeley Dynamics 492
Black-Clawson, pulp and paper mill equipment 496
treble-cluster vertical agitators 496
Black Country iron industry, by W. K. V. Gale (book) 213
Black, M., substation enclosure 56
training of industrial designers 703
Black, member of Computer Board for Universities and Research Councils 348
Black, P., on Strength of Materials: A Course for Students (book) 691
Black, S., on Man and Motor Cars: Ergonomic Study (book) 775
Blackett, P. M. S., Fawley Lecture 964. *Letter* 1051
Blackley, D. C., on High Polymer Latices (book) 301
Blackman, Keith, Ltd., cyclones (trade publication) 734
Blackwall tunnel, deck design for second 788
Blades, diamond, for cutting uranium carbide 1025
fan, Torrington 553
Blake, R. A., fuel oil for forge heating 771
Blakeborough, J., & Sons Ltd., Grafham Water reservoir 154
Blast cleaning machine, Wheelabrator 29
Blast furnace operation, Fukuyama steelworks 489
Blast furnace slag, bulk density control 647
Blasting, nuclear, feasibility of 510. *Letter* 623. *Correction* 980
Blaszkowiak, S., on Iterative Methods in Structural Analysis (book) 1077
Blaw Knox Ltd., bulk materials (trade publication) 130
paver-finishing machine 853
Bleaching of pulp, Wiggins Teape 810
Bleaching sequence in pulp production process 496
Blind land-navigation aid, Arma-Brown gyro compass 405
Blind persons, sonic aid for guiding 484
Bliss, E. W. (England), Ltd., vacuum flask casings, production of 939
Blocher, J. M., on Vapour Deposition (book) 515
Block Compressors Ltd., Monair 2 monobloc compressors 552
Blohm and Voss, hydrofoil craft *Corsario Negro* 1050
Bloksma Radiateurenfabriek NV, fresh water and lubricating-oil coolers 941
Blow-moulded spray tank, Harcostar 948
Blow torch, Supa-Nova 461
Blower(s), air, for cigarette inspection machines, Plannair 375
portable, Aerex Ltd. 126
and fans (trade publication) 650
trade publication 608
Blower units (trade publication) 516
Blowing system, Radar Pneumatics 496
Blowpipe anti-tank weapon, Short Bros. & Harland 492
Blue Funnel Line, cargo ship *Priam* 1011
Bluewater II drilling rig 587, 589
Blyth B power station, noise from cooling water pump motors at 640
Boadicea computer system extension, BOAC 189
Boal, G. A., on Electric Power Distribution: 415V-33kV (book) 817
Board, corrugating machine for 763
Board of Trade, duty remission scheme abandoned 615
Boat, motor, Sea Truck 189
moulded plastic, Durafloat '12' 835
runabout hydrofoil, Hy-Foil 1091
see also Yacht
Boehm, K., *University Choice* 220
Boeing Co., Lunar Orbiter spacecraft 1128
Boeing 707 airliners, curing system for sealant 311
Boeing 747 jet aircraft for BOAC 265
Boeing 2707 supersonic airliner 660
Bogie(s), freight (trade publication) 38
sliding, York 507
see also Truck
Bogie, K., resolved components indicator 803
Bogie wagons, 100 tons capacity 1066
Boiler(s)
automatic, in cargo ships 1012
Diplomat-44, for swimming pools 661
domestic, chimney design for, BRS 103
model tests on 807
output and order trends 438
packaged (trade publication) 470
shell, output and order trends 438
steam, Fulton range 80
trade publication 516
water-tube, output and order trends 438
Boiler cleaning, Hutter process of 458
Boiler cradles, Thomas 724
Boiler drum failure under proving water test 1018
Boiler efficiency increase by Houseman-Vapo process 1104
Boiler furnaces, sulphates in 1064
Boiler installation, Wiggins Teape, Fort William 498

Bolt(s), expansion (trade publication) 382
friction grip, Coronet 208
holding-down, loosening of, M4 motorway 486
Boltless Systems, storage system (trade publication) 302
Bondale, D. S., composite construction in Almondsbury interchange 678
Bonding of heparin to plastic surfaces 170
Bondy, O., economic spans 678
Boom, hydraulic, for transmission line repair 1061
Boom cranes (trade publication) 172
Boom, R. W., superconducting cable 718
Boosey & Hawkes, BEL electronic music board 619
musical blackboard, teaching aid 535
Booster, Gainmaster, for battery driven vehicles 930
gas, oil-free, Haskel 559
Boot(s). *See* Footwear
Booth, powder recovery, WMS 945
Booth, E. S., power supply for 1970 791
Booth, H., small control gear television advertising 783
Booth, James, Aluminium Ltd., aluminium tanks 731
Borer, tractor-mounted, dual-purpose, Danuser Digger 858
Borg-Warner type 35 automatic gearbox 625
Boring, and honing machines, Teha 514
jig, machine, Matrix No. 50 725
Boring machine for two components, W. J. Meddings (Sales) Ltd. 1143
Boring rig, augur, hydraulic, MacAlpine 946
Borishanskii, V. M., on Concise Encyclopedia of Heat Transfer (book) 37
Borough Polytechnic, symposium on high speed guided transport 1112
Bosch, electric concrete breakers 252
Bosch fuel injection system 538
Bosworth, G. S., training for industry report 141
Bosworth report on: graduate induction training for industry 136
training requirements for industry 141. *Letter* 707
Botley range of multiple instrument cases 512
Bottle(s), glass, inspection machine for 244. *Letter* 487
Bottle closure, crown cork, Triple Seal Crown 1123
Bottle counter, Trumeter 862
Boulton, Matthew, ormolu clocks 843
Boulton & Paul Ltd., Preflex beams 578
Boving & Co. Ltd., alternators for Cruachan pumped storage plant 1018
Bowater Packaging Ltd., fibre drum package for wire spools 70
Bower Trading Co., magnetic door catches (trade publication) 336
Bowers, T., floating exhibition ship 529
Box sections for Trois-Rivieres Bridge 1100
Boxer, O. G., on Examples in Engineering Thermodynamics (book) 83
Boxmakers Plastics Ltd., FST packaging machine 943
Boxvan semi-trailer, Silverline, Scammell-Duramin 507
Boyd, P. McC., supervisory training 139
Boyer, J. L., controlled rectifiers 722
B & R Relays Ltd., mercury wetted relays 375
Brabham, J., Grand Prix activities 143
Braby of Britain Group, Mark 12A Strad jet air starter 901
Brackenbury, M. C., London Metal Exchange 530
Braidwood, J., Metropolitan Fire Brigade 361
Brake, disc, motor cycles 923
Brake system for space research 353
Braking systems of motor cars, modifications to 968
Braking unit, Maxaret, in Ferguson R5 motor car 412, 414
Bramford, proposed expansion 480
Branching, basically, by D. Rowntree (book) 515
Brandenburg Ltd., stabilized power supply units 374
Brandt and O'Dell, air/land aircraft module link project 276
Brass, aluminium, Yorcalbro' 158. *Correction* 511
Bray Four 10/60 tractor, BMC 146
Brazing, fixed torch (trade publication) 302
Brazing machines, Autoflame 644
Breakdown. *See* Accident
Bregman & Hamann, Toronto-Dominion Bank Tower 844
Brentnall, E. G., signalling and telecommunications on Euston main line 793
Bretby-Wickham Mk. 2B underground supplies and salvage vehicle 330
Brick factory, Desford, NCB 377
Bridge(s)
cable-stayed, H. Thul 678
Greyfriars, over River Wye 360
motorway, proposals for, Orwell 480
on trunk roads and motorways 1084
prestressed, tests, Lehigh University 417
Severn Suspension. *See* Severn Suspension Bridge
steel, in Lancashire, J. M. Smith 678
suspension, Akashi-Naruto straights, Japan, proposals for 1048
Alvsborg, Sweden 967
Tagus, Lisbon, inauguration of 276
Tay road, opening of 312
temporary, F. Reinitzhuber and S. Krug 678
Trois-Rivieres, over St. Lawrence River 1100
wire rope for dismantling 313
see also Wye Viaduct
Bridge beams, Netherlands Delta Plan 115
Bridge bearing, SG iron 120
Tetron ptfe 717
trade publication 428, 734
Bridge collapse at Pulle, Belgium 880
Bridge girder decks, orthotropic, P. J. Dowling 677
Bridge and Structural Engineering, International Association for, symposium (London) 910
Bridge vibration and pedestrians, RRL 787
Bridgework and multi-storey buildings, structural steelwork in, conference on 676
Briggs, P., meeting Britain's power needs 487
Bright, Sir Charles, transatlantic cable 312
Brightside Heating Engineering Co. Ltd., Rowlatts Hill district heating scheme 748
Brims & Co. Ltd., Ocean terminal at Southampton Docks 544
Brinell hardness testing equipment, King Model-66 422
Bristol Aerojet, Petrel rocket 492
Bristol Aeroplane Co., purchase of share capital by Rolls-Royce 436
Bristol Aeroplane Plastics Ltd., piping system (trade publication) 38
Bristol-BTR (GRP) Ltd., plastics ship development 1089
Bristol Siddeley Dynamics, Black Arrow satellite launch vehicle engines 492
Bristol Siddeley Engines Ltd., acquisition by Rolls-Royce Ltd. 436
COSAG propulsion machinery for Type 82 destroyer 661
exhibits at Farnborough Show 491
M45 turbofan aircraft engine 491
Olympus 593B turbo-jet engines for Concorde airliner 321
Olympus gas turbine, marine developments 760
Olympus gas-turbine generator for Netherlands 705
Viper turbojet engine production history 1121
Viper 600 turbojet aircraft engine 354
Bristol-Thorneycroft Ltd., plastics ship development 1089
Britec Ltd., digital voltmeters 291
British Aircraft Corp.
English Electric Lightning aircraft 443
epoxy moulding for radome of Concorde supersonic airliner 897
ET316 anti-aircraft missile 492
ET 316 low-level anti-aircraft weapon system 188
exhibit(s) at Farnborough Show 443
exhibition of Guided Weapons Division 188
Jaguar strike trainer aircraft 443
One-Eleven airliner 443
order for, BEA 1084
Swingfire anti-tank missile 492
UK-3 satellite 1008
balancing tests 599
variable sweep strike aircraft 445
VC10 airliner revenue analysis 745
VC10 jet transport aircraft 443
see also Concorde supersonic airliner
British Airports Authority, new cargo terminal for London (Heathrow) Airport 834
British Aluminium Co. Ltd., Classic pressed aluminium sheeting 495
motor vehicle bodies (trade publication) 1078
British Association for the Advancement of Science, activities of 347
annual meeting (Nottingham) 347, 439
careers in science information work, T. E. Allibone 482
development of East Midlands 481
Granada Guildhall lecture on telecommunications, F. C. McLean 789
position and prospects of 439
presidential address to section G, by J. Greig 407. *Letters* 487, 707
silicon nitride, by D. Birchon 554
British Association for Commercial and Industrial Education, annual conference 572
conference on trends in training for skill 1045
Training Officer's Guide to the Education System in England and Wales, by C. Steers 178
British Broadcasting Corp., continuous light music programme on 247 metres 1121
cylindrical television masts 832
new BBC-2 television relay stations 230
stereophonic broadcasting 193, 230
British Celanese Ltd., activities in Derby 349
Celmar plastic ducting 851
British Cellophane Ltd., Terphane polyester film 1030
British Central Electric Co. Ltd., container pump for aggressive liquids 374
British Commonwealth. *See* Commonwealth
British Constructional Steelwork Association, conference on structural steelwork 256
in bridgework and multi-storey buildings 676
British Crane & Excavator Co. Ltd., Dominant Mobile diesel-electric crane 940
British Electrical and Allied Manufacturers' Association, aluminium small wire cabling 293
Prime Minister at dinner of 959
statistics on electrical exports 269
British Electrical Approvals Board, domestic appliances (trade publication) 910
British engineering week (Prague) 256
British Ermeto Corp. Ltd., high-pressure pipe couplings 560
British European Airways
efficiency improvement programme 959
Government assistance for replacement of aircraft 265
new cargo terminal for London (Heathrow) Airport 834
operational statistics 392
order for One-Eleven aircraft 1084
profits and losses 392
Vanguard airliner delays 94
British Filters Ltd., all-plastic filter unit 207
British Flame Research Committee, symposium on flames in industry—use of models 806
British Gear Manufacturers Association, meeting on bearing performance 852
British Geon Ltd., acetylene production plant, Barry, S. Wales 60
nitrile rubber (trade publication) 864
process operator training centre 102
pvc in building (trade publication) 952
British Grand Prix, Brands Hatch 143
British Gypsum Co. Ltd., silos for gypsum rock and perlite storage 1135
British Hovercraft Corp., hoverfreighter hovercraft 925
British Hydrocarbon Chemicals Ltd., aluminium tanks 731
British Industrial Exhibition (Moscow) 95
British Institute of Management, Elbourne Memorial Lecture, Lord Kings Norton 1000
British Insulated Callender's Cables Ltd., aluminium conductors 188
application of power capacitors (book) 171
electronic minecables (trade publication) 608
mineral insulated cables for 250 V (trade publication) 562
railway electrification (trade publication) 734
soil warming for strawberry beds 705
British Insulated Callender's Construction Co., Ltd,, cylindrical television masts 832
Railway electrification scheme, in Glasgow 274, 895
British Iron and Steel Federation, Stage 1 Report 177 views on nationalization 48
British Iron and Steel Research Association
automation of reheating furnaces 325
bulk density control of blast furnace slag 647
conference on strong tough structural steel 1036
Dynacarb analyser for carbon in steel 600
spray steelmaking process 708
yield stress/ultimate tensile stress ratio 354

British Jeffrey-Diamond, stable hole elimination equipment 55
British Lighting Council, light and sight in industry 1048
British Marine Equipment Council, Conqueror class cargo ship 744
formation and activities of 268
British Mechanical Engineering Federation, activities of 876
handbook on terms of contract 1042
British Motor Corp. Ltd.
Bray Four 10/60 tractor 146
exhibits at Motor Show 753
merger with Jaguar Cars Ltd. 93
modifications to braking systems of motor cars 968
redundancies 697
strike of motor car deliverymen, end of 957
British Newfoundland Corp., Churchill Falls hydro-electric power station 747
British Nuclear Export Executive, formation of 656
British Olivetti Ltd., machine tools (trade publication) 1078
Programma 101 computer 532
British Overseas Airways Corp.
air freight export containers 788
Boadicea computer system extension 189
Boeing 747 jet aircraft 265
curing system for aircraft sealant 311
new cargo terminal for London (Heathrow) Airport 834
British Overseas Engineering Services Bureau, activities 657
British Oxygen Chemicals Ltd., acetylene production plant, Maydown, Northern Ireland 60
ethylene dichloride (EDC) production plant 60, 61, 62
British Oxygen Co. Ltd.
Argonarc welding of heating elements 29
Clarke engine expansion machine 370
contaminated nitrous oxide gas cylinders 485, 576
crankshaft repair technique 396
nickel steel storage tank for liquid oxygen 979
pulse arc welding of aluminium 36
Saffire 3 cutting and welding equipment 602
trailer-mounted propane tank 857
British Paints Ltd., curing system for aircraft sealant 311
British Petroleum Co., *Sea Quest* drilling platform trials 55
turbo drill for North Sea explorations 228
British Plastics Federation, reinforced plastics conference (London) 1062
British Precast Concrete Federation, precast concrete (trade publication) 910
British Productivity Council 877
British qualifications, P. Kogan 178
B. Priestley 178
British Railways
accidents in 1965 1007
survey of 1099
Cartic wagon for motor car rail delivery 144
cellular container ships 925
container ships 441
Dart Valley Railway sale to private enterprise company 1049
diesel engine repair shop 832
electrification of Glasgow suburban system 894
electrification scheme from Glasgow Central to Gourock and Wemyss Bay 274
Euston main line electrification conference 783, 793
fires in diesel multiple-unit railway trains 970
400 ton press for flanging, edging and bending 33
grouting with pulverized fuel ash 170
Hunslet East oil rail terminal 1009
joint development of LVA24 diesel engines 435
maintenance of overhead traction equipment 939
Merry-go-round railway trains for coal supply to power stations 415
Neptune track condition recording and maintenance system 190
proposals for single terminus for Midland and Northern lines 440
railway track maintenance machines 448
reinforced plastics using matched moulding 1062
Severn Tunnel steam pumping engines. *Letter* 1051
soil consolidation press errors 164
spray painting shop, at Shildon 296
standard steam locomotives, by E. S. Cox (book) 1145
technical and scientific centre at Derby 349
thyristor control for multiple-unit train set 796
weed-killing contracts 1022
wheel burns on rails 979
White Paper on government policy for 226
workshop activities in Derby 349
British Ropes Ltd., Dyform process for wire rope for prestressed concrete 738. *Correction* 907
Dyform 7-wire strand 972
ropes from man-made fibres 355
wire rope for dismantling bridge 313
British Ship Research Association, annual report 1023–1024
developments in shipbuilding 921
British Slag Federation, road materials (trade publication) 952
British Spares Corp. Ltd., McAlpine hydraulic augur boring rig 946
British Standard En steels, mechanical and physical properties of (Vol. 2), by J. Woolman and R. A. Mottram (book) 171
British Standards Institution
change to metric system 508
corrosion prevention of structural steel 704
export information 691
freight containers 1047
iron oxide pigments 104
metric system change organization 831
opening of Newton House 831
pressure vessel(s). *Letter* 272
pressure vessel technology committee of enquiry 1044
surface finish 175, 176
British steam railway locomotive, by O. S. Nock (book) 993
British Telecommunications Research Ltd., video telephone development 1132
British Transport Docks Board, end-loading berths for Hull docks 227
Ocean terminal at Southampton Docks 544
ore terminal for Port Talbot 353
tanker terminal for Humber at Immingham 274
British Waterworks Association, stainless steel water pipes 442
British Welding Research Association, broaching machine for cutting charpy test notches 980
British Winders, pulp and paper mill equipment 497
Britten-Norman, Islander aircraft, Government finance for 481
Islander light transport aircraft 445
Brize Norton, Western Europe's biggest hangar 968. *Letter* 1090
Broaching machine for cutting Charpy test notches, BWRA 980
Broad-line nuclear magnetic resonance 681
Broadcasting, stereophonic, BBC 193, 230
Broadcasting equipment, automatic operation and control of, conference on 884
Broadcasting Stations, guide to 1035
Brobowski, Jan, and Partners, Portsmouth Evening News building 972
Bromilow & Edwards Ltd., hydraulic tipping gears 505
Brons diesel engine 942
Brookhirst Igranic Ltd., BHI foot and palm operated switches 606
hunting tooth limit switch 1028
Power 70 switchboard 251
time delay unit 332
Brooks, D., survey into effect on workers by mergers 219
Brooks extractor fans for painting shop 296
Brooks Instrument NV, electromagnetic flowmeter, model-346 462
Broom & Wade Ltd., Avdel air-operated screwdriver 1144
stationary compressors 557
Brosan, G. S., on Advanced Electrical Power and Machines (book) 649
Broughton, J., & Son (Engineers) Ltd., Proximitor Guard machine operator protection system 986
Brouwershaven dam, Netherlands Delta Plan 119
Brown-Boverie, compressors for acetylene production plant 62
temperature measurement of ultra-centrifuge rotor 763
Brown, D. W., cermets 432
Brown, F. A. S., on Great Northern locomotive Engineers (book) 561
Brown, F. H. S., CEGB annual report 667
Brown, J. G., on X-rays and their Applications (book) 817
Brown, John, Engineering (Clydebank) Ltd., formation of 656
heavy-duty industrial gas-turbines 656
Brown, S. G., Ltd., Arma-Brown gyro compass blind land-navigation aid 405
Brown & Sharpe Ltd., Circuitstack hydraulic sandwich assembly valves 121
directional hydraulic valves 558
Browne, J. S. C., on Basic Theory of Structures (book) 469
Bruce, J. P., on Introduction to Hydrometeorology (book) 515
Bruce Peebles & Co. Ltd., transformers for Longannet power station 1017
Bruning 2000 electrostatic copying machine 597
Brunner Machine Tools Ltd., Bimax bar and tube cutting machine 465
drill grinding machine 902
Hofmann Type AB175 precision tool grinding machine 211
Brush Electrical Engineering Co. Ltd., substation enclosure 56
Brush springs (trade publication) 336
Bruun and Sorensen A/S, Rowlatts Hill district heating scheme 748
Bryan, E. R., integration between frames, walls and floors 680
Bryden, W. E., paper pulp plant 810
Bryle, S., fire regulations 677
BS & W oil contamination monitor 163
BSA Tools Ltd., lathes for flow-line and small batch production 723
Buccaneer naval strike aircraft 445
Buchanan, C., report on urban growth in the Portsmouth/Southampton area 221
Buick, GS 400 series motor cars 543
V8 motor car engines 543
Building
56-storey, Toronto-Dominion Bank Tower, design and construction 844
industrialized, structural steel in, J. W. Davidson 680
trade publication 172
joint movements in curtain-wall 128
multi-storey, and bridgework, structural steelwork in, conference on 676
fire regulations on, G. B. Colbridge 677
in Canada, D. L. Tarlton 679
in Germany, H. Hentrich 679
in Holland, H. J. J. Engel 679
new, security in 833
pvc in (trade publication) 952
sectional (trade publication) 428
system, R. R. Freemantle 680
under construction, collapse of 832
use of plastics in, research on 1090
see also Concrete
Building Centre, building maintenance manual and job diary 532
Building finishes (trade publication) 172
Building Frame, National, for precast concrete structural systems 232
Building industry, computers in 527
materials handling in (report) 918
training in 527
Building maintenance manual and job diary, Building Centre 532
Building materials, dictionary of, by W. Kinniburgh (book) 649
smoke density values of, NBS 204
Building regulations, by C. Kennard and J. Dufton (book) 37
M. Mendoza 680
Building Research Station
activities of 594
appointment of F. G. Thomas 267
chimney design for domestic boilers 103
joint movements in curtain-wall structures 128
open days at Garston 594
structures testing laboratory 143
Building sealing strip (trade publication) 214
Bulgaria, battery factory for, Vidor 1136
Bulk density control, blast furnace slag 647
Bulk density measurement by backscatter gauge 388
Bulk materials (trade publication) 130
Bulk storage indicators, Elniva 1071
Bull, J. W., on Introduction to Safety at Sea (book) 1111

Bull, T. W., noise from pump motors 640
Bullgrader, crawler tractor and, International Harvester 1034
Bullivant, D. B., Information Scientists' conference 140
Bulloch, C., silicones 343
Bumpers, Dur-Ni nickel coating for 1123
Bungalow, versatile, at Welwyn 789
Bureau of Standards. *See* United States National
Burflex Ltd., compressed-air driven immersion vibrator 379
Burger, W., on Ship Stabilizers (book) 301
Burlington Engineers Ltd., Schwing ABP30 concrete pump 686
Burmeister and Wain, diesel engines type 84-VTBF18Q 1011
trawler/refrigerator ship 882
Burner
gas (trade publication) 428
oil, control box 73
for forge heating 771
Hero rotary cup 1104
propane, Wanson 296
Burner performance, model tests on 806
Burnishing machine, polishing and, Osro-pol 465
Burnley Engineering Products Ltd., honeycomb seals 405
Burstall, A. F., combined arts and science course 220
Bursztyn, I., reservoir water evaporation control 326
Burton, D. R., supervisory training 139
Burton, Montague, laser for cutting out suits 1009
Bus, gas-turbine, Turbo-Cruiser 929
Bus routes in London, revision of 527
Busbar, laminated, in low-voltage switchgear, Ellison 243
Busbar insulation, pvc extrusions for, Marshall 604
Bush Murphy Electronics, teleprinter 944
Business, modern, mergers in, by N. A. H. Stacey (book) 863
Business Archives Council, annual report 213
Business Efficiency Exhibition, copying machines 595
exhibits at 684
Business report writing, by E. Sidney (book) 255
Butland, A. N., civil engineering works of Euston main line 793
Euston main line electrification 795
track maintenance machines 448
Butler, C., Jetstream fuselage layout 403
Butyl-lined silos, Esso 1053
Butyl rubber bag for grain 247
Butyl rubber 'pillow' tank for storing liquids 982
Butyl rubber tank lining 1138
Bygrave, R., steelfounding 127
By-pass, Cromwell, slip-form paving machine trials 1076

C

Cabinet, tape protection, Chubb 103
Cable(s)
aluminium, production of, BICC 188
aluminium electrical wiring, position and prospects of 293
and hose connector, rotatable, AEI 424
electronic mine (trade publication) 608
for supergrid is disused railway tunnels, Pirelli General 1125
mineral insulated, for 250 V (trade publication) 562
submarine, to Mull 313
superconducting, Atomics International 718
transatlantic, centenary of 312
underground, cooling method 1009
underground laying, cost in UK and US 1121
undersea telephone, SF system, Bell 76. *Letter* 355
see also Power transmission; Wire rope
Cable Covers Ltd., helical thimble and wire rope protector 774
lifting attachments for concrete units 120
Cable de Lyon, cables for Sardinia tramsmission line 1096
Cable drum transporter, RM Trailers 1075
Cable end protection thimble 204
Cable glands for flameproof applications 26
Cable ladder system (trade publication) 562, 1112
Cable laying for supergrid in disused railway tunnel 1125
Cable spinning for Severn Suspension Bridge 455
Cable-stayed bridges, H. Thul 678
Cable stripping cartridges, Technical Representation 604
Cable-stripping pliers, Plansel 1144
Cadillac Eldorado front-wheel drive motor car 575
Cadmium sulphide in electroluminescence 44
Cain, W. D., industrial designer 715
Caldecot, Lord, guided weapons and spin-off 188
Calder Hall nuclear power station, tenth anniversary 669
California cycle exhaust emission control 660
California series B rotary positive blowers (trade publication) 608
Caliper, dial, Rabone 253
Calmal pickling processes 286
Cam Controls & Automation Ltd., ventilation of Birmingham New Street station 880–881
Camac Cask Co. Ltd., pulse arc welding of aluminium barrels 852
Camaro. *See* Chevrolet 543
Cambion Electronic Products Ltd., thermo-electric devices (trade publication) 864
Cambridge University, computer-serviced engineering design facility 661
gear research at 179
Camera
image converter, Beckman 857
Polaroid Land CU-5, for medical and scientific use 931
recording, Oscillophot 907
sub-miniature, Minolta 789
television, transistorized, GEC 533
transistorized vidicon, GEC 405
Cammell Laird, merger announcement 49
Campbell-Gray Ltd., plant hire (trade publication) 776, 818
Campbell, I. D., proper use of consultants 272
Campbell & Isherwood Ltd., alarm system for Mersey Tunnel 230
Can contents checking equipment, Hytafill 509
Can-making equipment, skills analysis training on 182
Canada, high-voltage dc power transmission 583
structural steel in (trade publication) 608
Canada's nuclear story, by W. Eggleston (book) 691
Canadian Institute of Steel Construction, Canadian structural steel (trade publication) 608
Canadian-Vickers Ltd., rolling stock for Montreal Metro 891
Canal, Grand Union, garage extension over 835
North Sea, Amsterdam, Coen Tunnel road crossing for 10
Panama, by R. Hammond & C. J. Lewin (book) 171
nuclear blasting proposal 510
'Cannon Kanmuvair' industrial fan installations (trade publication) 302
Cannon, L., work study methods 616
Canvey Island, natural gas appliance conversion 186
Capac Co. Ltd., testing instruments (trade publication) 952
Capacitance tester with digital readout 32
Capacitor(s)
ceramic, Aerovox 1029
Lemco 162
Mucon 1072
electrolytic, Lectroflash 374
glass (trade publication) 336
polycarbonate, STC 689
power, application of (book) 171
rectangular can, using mixed paper/polyester dielectric 730
Cape Asbestos, glass fibre/Noramite laminate for substation enclosures 56
Capillary-porous bodies, heat and mass transfer in, by A. V. Luikov (book) 607
Capital goods, Design Centre Awards for 54
Capper-Neill Ltd., floating tank roofs (trade publication) 910
tanks for bitumen refinery 683
Capricorn Industrial Services, Allplas plastic balls 275
Capshell diving bell 593
Captain International Industries, Bell Captain coinless dispenser and refrigerator vending machine 880
Car, motor. *See* Motor car
Car ferry, *Princess Victoria*, sinking of 484
Skagerak, sinking of 484
Car park, multi-storey, and shopping area Yield Hall, Reading 1122
trade publication 428
Car park equipment, automatic, Venner 855
Car parking accessory, Transauto 881
Caravan(s), development position and prospects 971
motor, Ford Sprite Transit 621
Regency Braemar 971
Caravan compensator, Carlight 971
Caravan Exhibition, International (London) 971
Caravan stabilizer design, C. P. Witter 971
Caravans International Ford Sprite Transit motor caravan 621
Carbide tooling, Kennametal 723
Carbon in steel, Dynacarb analyser for 600
Carbon-dioxide lasers, SERL 770
Carburettor, exhaust emission control systems 660
Solex 40 PICS 627
Card-program control system, Fukuyama steelworks 489
Card reader, Lectromatic 375
Careers in Information Science, T. E. Allibone 482
Cargo(es), petroleum: measurement and sampling, by H. Hyams (book) 129
Cargo Aids Ltd., helicopter cargo hook 512
Cargo handling in tanker *Dolabella* 58
Cargo-handling system, Finnflow pneumatic-hydraulic-mechanical 1102
Cargo hook, helicopter, Cargo Aids 512
Cargo ships
automation in 1011
Conqueror class 744
Glenalmond 1011
Priam 1011
Spero, telecommunications on 398
Cargo terminal, new, for London (Heathrow) Airport 834
Carlight caravan compensator 971
Carlyle Air Conditioning & Refrigeration Ltd., air-cooled condensing units 465
chilling packages (trade publication) 1078
evaporative condensers/fluid coolers 80
Carmody Universal Process Tutor teaching machine 878
Carne, E. B., on Artificial Intelligence Techniques (book) 255
Carolina Port B power station 1015, 1018
Carr, J., medium-speed geared diesel engines 1007
Carrier-Ross Ltd., ventilation scheme for Wiggins Teape, Fort William 497
Carrozzeria Fissore open sports motor car 888
Carruthers, C. D., & Wallace Consultants Ltd., Toronto-Dominion Bank Tower 844
Carruthers, Davies & Co., Portsmouth Evening News building 972
Carruthers, J. H. & Co. Ltd., overhead travelling cranes 495
Cartem (Kent) Ltd., Cartematic tar or bitumen storage tank 855
Cartematic tar or bitumen storage tank 855
Carter, A., battery motor vehicles 930
electric motor car 744
Carter Coaster, electric motor car 744
Carter, E. F., on Dictionary of Inventions and Discoveries (book) 863
Carter, J. W., membrane separation processes 1116
Carter Thermal Engineering Ltd., cooling tower packing (trade publication) 608
fans and blowers (trade publication) 650
ventilation of Birmingham New Street station 880–881
Cartic wagon for motor car rail delivery 144
Cartons using polypropylene laminated films, adhesive for 1138
Cartwright, N. C., energy for new towns 838
Carver & Co. (Engineers) Ltd., T-slot clamp 168
Case(s), instrument, Alton 606
Case packer (trade publication) 1112
Cassidy, E. C., light from exploding wire 75
Cassignol, E. J., on Semiconductors Vol. 1 (book) 649
Casson, W., CIGRÉ conference 16
Cast iron propeller, austenitic spheroidal graphite 158
Cast metals, typical microstructures of, by G. Lambert (book) 607
Castellated beams (trade publication) 172
Casting, slip, cermets 431
steel, shell moulded, Catton & Co. Ltd. 127
Castle, B.
express train arrival times 783
meeting of International Road Federation 525

on rush hour in London 1000
road construction programme 6
White Paper on transport policy 226
Castors, industrial, heavy duty, ML Industrial Products Ltd. 300
Catalysts, filtering, ICI 551
Catamaran, inflatable, Underwater and Marine Development 144
Caterpiller Tractor Co. Ltd., D8H tractor 855
earthmoving (trade publication) 994
Catherwood, F., Quality and Reliability in Nation's Economy 877
Cathode ray tube(s) for colour television, RCA 273
Cathode ray tube display, computer-controlled 1141
computer driven, Ferranti 372
Cathodic sputtering
applications 612
details of process 611
low pressure 611
radio-frequency 612
reactive 611
Catling, D. T., Victoria Line 798, 883
Catmur Machine Tool Corp., TS500 rotary transfer machine 602
Catton & Co. Ltd., steel castings production (open day) 127
C.A.V. Ltd., diesel filter (trade publication) 994
Cave, J. C., loose bolts on the motorway 574
Cavidrill diamond grinding points 422
Cavitation
artificial production of 1040
basic principles of 1037
bubble collapse 1038
bubble growth 1037
definition of 1037
design considerations 1039
Engineering Outline 1037
noise and erosion accompanying 1037, 1038
practical effects of 1038
uses of 1040
Cavitation meter, Westinghouse 371
Cavity wall insulation with rockwool 1140
Cawley, S. R., dual laminates 1062
Cawston linkage system for piston data transmission 149
Ceiling, acoustic (trade publication) 172
Cell, fuel. *See* Fuel cell
photoconductive. *See* Photoconductive cell
see also Battery
Cellactite protected steel sheeting for roofing 599
Celleco Co-730 Vortex cleaners 496
Celleco Vorject 306 cleaners 496
Celmar plastic ducting 851
CEM, oil burner control boxes 73
Cement, asbestos, pressure pipe, Everite 856
see also Concrete
Cement & Concrete Association 699
visit to India, Japan and Hong Kong 302
Cementation Construction Ltd., Greyfriars Bridge 360
Cemented carbides 432
Central Electricity Generating Board
Aberthaw Fisher shallow-draught vessel for generating plant 231
annual report 667
boiler cradles 724
effects of seamen's strike 49
400 kV supergrid power lines in disused railway tunnels 1124
gas-cooled nuclear reactor for Dungeness B nuclear power station 656
generating plant capacity 235. *Letters* 314, 487
Kingsnorth power station insulating pipes 418
Multikon superconductor for magnets 1105
natural gas prospects 108
1,000 MVA transformer for Penn substation 353
Paternoster office complex 145
power station closure 1092
power station construction programme 791
power station construction programme delays 1084
power station design, construction and commissioning procedure 240
power station(s) planned and under construction 235
project groups 240
pulverized fuel ash (trade publication) 336
660 MW turbine generator sets 67
Sovex document handling system 145
Stella-Cockenzie power transmission line 351
symposium on clean air 660
turbine automatic control equipment systems 534
uses for pfa (trade publication) 562
Central gear, Hydema 940
Central Training Council, activities of 224
publications 225
Centre for inter-firm comparison rubber goods industry 1118
Centrifugal pump. *See* Pump
Centrifuge, automatic pusher, Continuous D-Hydrator 857
batch basket, Tempest 31
trade publication 256
Centromor, SWD smoke detector 159
Centurion battle tanks, zip covers for 681
Ceramic capacitors, Aerovox 1029
Lemco 162
Mucon 1072
Ceramic cored heater band, Cole 1107
Ceramic semiconductors, superconducting, NBS 28
Ceramics, alumina (trade publication) 650
as engineering materials 554
reinforced 998
transparent, Yttrabox 805
Cermets
applications 431
basic principles 429
cold pressing 431
definition 429
dispersion hardening 432
Engineering Outline 429
extrusion 431
hot pressing 431
hot working 431
machining 431
nuclear applications 432
oxides, types and properties 430
production methods 431
resistors 432
sintering 431
titanium carbide, properties 430
types and properties 429
Cessna 1967 model 150 aircraft 353
Chain, roller, pinions and wheels, Renold 606
Rex Side Bow 424
Challenger T container semi-trailer 507
Chamberlain Group Administration Ltd., industrial fans (trade publication) 302
Chamberlain Industries Ltd., Staffa hydraulic motor 606
Chambers, Sir Paul, conference of Institute of Directors 875
Quality and Reliability Year 741
Champion, T. A., bearing performance 852
Chancery Insulations Ltd., fire protection of steel 599
Channel Tool Distributors Ltd., circular saw (trade publication) 382
Channel tunnel, position and prospects of 782
Letter 922
Chantiers de l'Atlantique tanker *Dolabella* 58
Chapman, Almonsbury interchange 678
Chapman Report, on training of naval architects 138
Characteristics, introduction to the method of, by M. B. Abbott (book) 213
Charlton, T. M., on Model Analysis of Plane Structures (book) 37
Charnley, C. J., fluidics 566
Charpy test notches, cutting, broaching machine for, BWRA 980
Chart recorder, potentiometric, AEI 332
Charter for white-collar workers 435
Chartered engineers and technicians. *Letters* 746, 883
Chassis, semi-trailer, Pedigree Plus Straight Frame 505
six wheeled freighter/tanker, Atkinson Vehicles 506
truck, Bedford KM range of 505
Chassis construction system for circuits, Lektrokit 1072
Chebotarev, N. P., on Theory of Stream Runoff (book) 909
Chemetals Ltd., Fernox Crystal corrosion inhibitor 248
Chemical analysis. *See* Analysis
Chemical cleaning plant for paint-mixing vessels, General Descaling 466
Chemical Construction (GB) Ltd., welding technique, stainless steel 369
Chemical Engineer, computer methods for, symposium on (Nottingham) 776
Chemical Equipment Engineering Ltd., stainless steel rotary vacuum filter 167
Chemical Exhibition-Symposium, International (Milan) 705
Chemical Industry, Economic Development Committee for the, aims of 742
Italy, growth statistics 705
Chemical plant, output and order trends 438
Chemical plant equipment, delivery problems, Industrial Reorganization Corp. 136
Chemical plant manufacture, dual laminates 1062
Chemical recovery, Wiggins Teape, Fort William 498
Chemical Society, computer-based information retrieval service 691
Chemidus Plastics Ltd., Chempact plastics gas piping 947
Chemiflex mechanical seal 292
Chemi-pet marker 27
Chemistry and physics, handbook of, by R. C. Weast (book) 1111
Chempact plastics gas piping 947
Chesner, L., flame-retardant polyester resins 1062
Chesterfield Tube Co. Ltd., compressed-gas cylinders 404
Chesters, A. K., aerodynamic studies on turbulent jets 807
Chesterton Windmill, restoration of 275
Chevrolet Camaro motor car 543
Chieftain battle tank 621
Chigier, N. A., model tests on furnaces 807
Chill rooms, abattoir, Manchester 69
Chilling packages (trade publication) 1078
Chimney, Cosiclad, Birds Eye Foods 103
domestic boiler, condensation in 103
heat transfer in 103
for industrial oil-fired plants (booklet) 717
Chimney design for domestic boilers, BRS 103
Chloride Electrical Storage Co. Ltd., annual motor show lunch 744
Chlorination Equipment Ltd., Grafham Water reservoir 154
Chlorine dioxide production for paper pulp bleaching 810
Chlumsky, V., on Reciprocating and Rotary Compressors (book) 1035
Christensen Longyear (UK) Ltd., asphalt sampling with core drill 1135
Christiani & Nielsen, Rowlatts Hill district heating scheme 748
Christiani-Shand, slip form road paving unit 396
Christie's sale of historical engineering equipment 535
Christopherson, D. G., BACIE annual conference 572
Christy, HM Chief Inspector of Factories 525
Christy & Norris Ltd., Spruemaster granulator cutters 248
Chromatography equipment, Philips 686
Chrysler Corp., video tape machine to diagnose machine breakdowns 1134
Chubb, G. C. H., security standards in buildings 834
Chubb & Son's Lock & Safe Co. Ltd., tape protection cabinet 103
Chucks, drill (trade publication) 516
gun, magnetic 32
Churchill, Charles, Group, Flutomatic flute milling machine 1025
Churchill, Charles H. Ltd., bar automatic lathe (trade publication) 1112
Froriep D850 IV mill-roll lathe 1067
Churchill Falls hydroelectric power station, construction plans 747
Churchill Falls (Labrador) Corp., Churchill Falls hydroelectric power station 747
Churchill Falls power scheme 583
Churchill Gear Machines Ltd.
automatic chucking lathe 30
automatic hobbing machines for starter-ring teeth 81
machines loaned for gear research 179
Vari-feed system in hobbing machines 682
works extension at Blaydon 30
Chusan, SS, evaporator cutting and stitching 169
Ciba (A.R.L.) Ltd., epoxy resins for coatings 1025
Cibie DI7 iodine vapour headlamp 1010
CIC European Service, pressure transducers 71
Cigarette inspection machines, air blowers for, Plannair 375
CIGRÉ conference on electric power systems 16
Cinema film. *See* Film, cinema

Circuit(s), integrated, SGS-Fairchild 804
Lektrokit chassis construction system for 1072
linear, elements of, by R. E. Scott (book) 381
tuned, use of resonant gate transistor 732
Circuit breaker, energy limiting, I-T-E 459
Circuitstack hydraulic sandwich assembly valves 121
Circular saw. *See* Saw
City University, hybrid computers 1064
organization of departments and courses 659
Civil engineer(s), computer service for 458
Civil engineering in Euston main line electrification 793
Civil Engineering Economic Development Committee, Lofthouse report on 6
Civil engineering films (cinema) and models (trade publication) 1036
Civil Engineering Research Association, arguments for retaining 568
Civil service, engineer and 919
Fulton Committee on 960, 1120
C & L Developments Ltd., remote control system for tractors 1065
CLA parameter for surface finish 173
Cladding, of diamond abrasive 286
roof (trade publication) 608, 1036
Clamp, drilling (trade publication) 1078
machine, Slimline 421
T-slot, Carver 168
Clark, B. L., training in structural engineering 679
Clark Engineering Services, bulk storage indicators 1071
Clark Equipment Ltd., Clark Sheid rubber-wheeled road roller 856
Clark, F., on Standards of Welding Achievement during Training (book) 37
Clark-Hancock, tractor-scraper 1075
Clark, P. J., composite construction in Almondsbury interchange 678
Clark, R. H., on Introduction to Hydrometeorology (book) 515
Clark Sheid rubber-wheeled road roller 856
Clark, W. H. D., meeting Britain's power needs 487
Clarke, A. C., fire rating 680
Clarke Chapman & Co. Ltd., thyristor controlled variable speed drive 425
Clarke engine expansion machine 370
Clarke expansion engine 523
Clarke, H., fibre reinforced materials 998
Clarkson (Engineers) Ltd., milling cutters 1110
Clary Ltd., computers for construction industry 102
Classic pressed aluminium sheeting 495
Classification, coding and group technology, conference on 1036
Claudgen Ltd., infra-red heating unit 987
Clausen, H., qualified manpower 746
technique 487
Claxton, E., Euston main line electrification 794
Clean air, symposium on, CEGB 660
Clean Air Act (1956) results of 571
Clean Air Exhibition (London) 660
Cleaner, mobile, Tempest 1144
steam, Stone-Vapor 125
underwater vacuum, Unit Swimming Pools 300
Cleaning, boiler, Hutter process of 458
gas, industrial, by W. Strauss (book) 561
pipe (trade publication) 516
ultrasonic, magnetostrictive transducer system for 124
vessel internal, rotating head for, Spray-O-Mat 813
Cleaning equipment, ultrasonic 378
Cleaning granular products, air separator for, Gunson's 1030
Cleaning machine, blast, Wheelabrator 29
Cleaning plant, chemical, for paint-mixing vessels, General Descaling 466
Cleaning unit, spray-painting, QZ 426
Clearex Products Ltd., Durafloat '12' moulded plastic boat 835
Clearshield range of radiation glasses (trade publication) 1146
Cleathero, B. E., cold moulding 1062
Cleco Tools, pneumatic screwdrivers (trade publication) 516
Cleveland Bridge & Engineering Co. Ltd., Severn Suspension Bridge 456
Wye Viaduct 499
Cliff, J. F., CIGRÉ conference 16
Climatology, applied: an introduction, by J. F. Griffiths (book) 255
Clip, electrical conduit, Klip-lok 862
magnetic 161
Clocks, ormolu, Matthew Boulton 843
Clothing Machinery and Suppliers Exhibition, International (Sydney) 562
Clutch, freewheel, Mini 511
friction, Powder Couplings 376
Warner SF400 electro-sheave, for refrigerated motor vehicles 897–898
see also Coupling
Clutterbuck, C. K., on 3-D scale drawing (book) 1077
Clydeside Machine Tool Co. Ltd., tapping attachments (trade publication) 38
Clywedog Dam, buttress design 756, 758
design and construction 755
model studies on 758
CO_2. *See* Carbon dioxide
Coach. *See* Motor vehicle
Coal, fluid-bed drying plant for, Heyl 808
small, moisture measuring head for 1025
strength, fracture and workability of, by I. Evans and C. D. Pomeroy (book) 775
Coal Board. *See* National Coal Board
Coal conveyor from mine, Longannet power station 1017
Coal cutting machine maintenance, ASP for 682
Coal industry, mechanization of 528
Coal mine. *See* Colliery: Mine
Coal mining industry. *See* Coal industry
Coal separation, automatic, from stone 205
Coal supply to power stations, Merry-go-round railway trains for 415
Coal tip(s) disposal problem 743
Coal tip disaster, Aberfan. *See* Aberfan
Coal Utilization Council, solid fuel appliances (trade publication) 910
Coanda effect, in fluid switch 287
in fluidics 563
ventilation system employing, Olin 987
Coating(s), epoxy resin, HPS 1025
of plastics with metals, conference on 1026
water main (trade publication) 734
zinc. *See* Galvanized
Coating thickness measurement by radioisotope instruments 388
Cochran Construction Ltd., Cosiclad chimney 103
Cockcroft, Sir John, nuclear power development 669
Cockenzie power station 1015
boiler drum failure under proving water test 1018
CODAG (combined diesel and gas turbine) system 762
Coding, classification, and group technology, conference on 1036
CODOG (combined diesel or gas turbine) system 762
Codrongianos converter station for power transmission line to Sardinia 1094, 1097, 1098
Coen Tunnel road crossing for North Sea Canal, Amsterdam 10
Cogswell, A. E., & Sons, Portsmouth Evening News building 972
Cohen, George, Machinery Ltd., Scando hoist system for construction sites 721
Weyrite weighbridge machines for road traffic 642
Cohen, George, 600 Group, acquisition of Kendall and Gent from Staveley Industries 656
acquisition of share capital of F. J. Edwards Ltd. 828
Hiab 174 lorry loader 853
machine tool division 828
Coilfeed Systems Inc., acquired by US Industries Inc. 882
Coin lock-out relay for vending machines, Keyswitch 906
Coinage, decimal, White Paper on 1041
Colbridge, G. B., fire regulations on multi-storey buildings 677
Colchester Lathe Co. Ltd., training centre 1003, 1067
Colchester Tillage, Lemken reversible ploughs 146
Cold extrusion. *See* Extrusion
Cold forging, high-pressure techniques, ASEA 765
Cold-forming large section plate, AEI 369
Cold room temperature control 371
Cold store, abattoir, Manchester 69
Cole, E. H., on Engineering Thermodynamics (book) 1111
Cole, H. A., quantising analogue information 325
Cole, R. H., Electronics Ltd., Reutlinger portable dynamic balancing device 211
Cole, R. H., Ltd., ceramic cored heater band 1107
Colinese, P. E., Information Scientists' conference 140
Collar, vacuum feed-through, and microcircuit jig, Genevac 730
Collating machine, Thomas 100-station Auto-Sorter 685
Colliery
Bevercoates, delay in automated production 616
use of computers 397
Lady Windsor, underground radio systems 575
see also Mine
Colliery roof support, hydraulically powered 209
Collis, J. & Sons Ltd., mechanical handling (trade publication) 470
Collision. *See* Accident
Colorado School of Mines, waste material research 850
Colormatic traffic map 366
Colour coding machine for pvc-insulated wire 124
Colour TV delay line, Mullard 249
Colston Appliances Ltd., Turbo-jet dishwasher 967
Colthorpe, K. J., intermittent heating 600
Colville Group, steel requirements for nuclear submarines 311
Colvilles Ltd., nickel steel storage tank for liquid oxygen 979
Colwyn-Foulkes, S., Clywedog dam 759
Combustion Chemicals Ltd., Hutter process of boiler cleaning 458
Combustion control process, Houseman-Vapo 1104
Combustion Engineering Association, conference on energy for new towns (Harrogate) 395, 838
Comet flashing beacon 1110
Commercial Hydraulics Ltd., new pumps 560
Commercial Motor Show, exhibits at 580
Committee of Directors of Research Associations, evidence to Fulton committee on civil service 1120
Common Market, Britain's entry discussions 781
Britain's entry into, position and prospects 1119
Commonwealth. *See* Australia, etc.
Commonwealth Conference on Education and Training of Technicians 699
Commonwealth Education Liaison Committee 699
Communicating the results of research and development, symposium on 84, 614
Communications, in fire fighting 365
satellite. *See* Satellite communications
Communications engineering, principles of, by J. M. Wozencraft (book) 36
Communications Satellite Corp. 932
Communications system, facsimile, Mufax Courier-500 684
light traffic route microwave 1049
microwave, Australia 313
Compact component bridge 27
Compact radiotelephone, Pye 485
Compactor, earth, Jumping Jack 79
soil, vibratory, Ho-Pac 946
Compagnie Générale de Chauffe, interest in Associated Heat Services Ltd. 784
Compagnie des Raffinages Shell Berre at Petit-Couronne, Teflon lined refinery effluent piping 120
Companies Bill, innovations to 827
Compass, gyro, Arma Brown 1011
Mk. XXX, Sperry 159
Component bridge, Compact 27
Composite beams, continuous, R. P. Johnson, K. van Dalen and A. R. Kemp 677
Composite construction, in Almondsbury interchange, D. S. Bondale and P. J. Clark 678
S. G. Silhan and R. C. Westbrook 679
R. C. Westbrook 680
Composite materials (book) 1035
by L. Holliday (book) 691
see also Fibre reinforced materials
Composition-backed sheets (trade publication) 1112
Compressed air, and lubrication equipment, Norgren 557
trade publication 952
see also Pneumatic
Compressed air components (trade publication) 214
Compressed air nozzles, Metalock 1024
Compressed-gas cylinders, Chesterfield 404
Compressible media, nonstationary flow of, by R. Sauer (book) 1035
Compression, isostatic, of powder metal parts, ASEA 766
Compression block testing for gear strength deter-

mination 461
Compression coupling for plastic or glass tube, Simplifix 814
Compression fittings, Simplifix 560
Compression members, metal, design criteria for, guide to, by B. G. Johnston (book) 561
Compression tools, power-operated, BICC-Burndy 379
Compressor
duplex, Motivair 297
for acetylene production plant, Brown-Boverie 62
Holman Rotair 574
monoblock, Monair-2 552
oil-free, Waller 378
oil-free rotary-screw, Atlas 987
order position and prospects 1086
output and order trends 438
rotary, reciprocating and, by V. Clumsky (book) 1035
screw, Joy 946
Stal-Laval UD2 type 1014
stationary, Broom and Wade 557
Hydrovane 560
tandem, H.P.C. 553
trade publication 38
turbo, theory and design of, by W. Traupel (book) 649
two crank, Alley 557
unlubricated reciprocating Hymatic 419
Computer
air traffic control by 228
analogue, basic description 693
comparison with digital 693
definition 693
digital computer programming 696
elements of 693, 694
Engineering Outline 693
operation requirements 693
output 696
transistorised 696
uses of 693
Argus digital input/output equipment 1141
Boadicea system extension, BOAC 189
comparison of British and American 575
digital, ARCH-2000 815
basic concepts, by D. Whitworth (book) 1145
by K. C. Parton (book) 863
programming by analogue computer 696
S-TWO 1032
system analysis by, by F. F. Kuo and J. F. Kaiser (book) 863
digital machine, fundamentals of, by G. Hintze (book) 863
EELM System 4, for GPO Giro money-transfer system 234
electronic, simple approach to, by E. H. W. Hersee (book) 335
EMIAC II analogue, control panel of 715
engineering design facility 661
farming application, Ford 10
for construction industry, 102
hybrid 1064
ERA project 276
operation of 1064
ICT 1905, at Loughborough 1046
in building industry 527
in mines, AEI 397
in shipbuilding industry, design by 661
information retrieval 691
KDF 9, used on Five Ways Underpass, English-Electric-Leo-Marconi 508
laser colour change for 325
microelectronic, Myriad 2, Marconi 578
motor vehicle route planning by 788
Myriad, for air traffic control 228
Programma-101 532
railway track condition recording and maintenance system 190
small (trade publication) 952
testing equipment for ICT-1901 162
Univac 1107, Computer Services (Birmingham) Ltd. 150
use in shipbuilding 1023
use in Swedish Military Weather Service, Marconi 484
use in tailoring 1009
use of, Bevercoates colliery 397
VSR 16000 for traffic control 536
Computer Board for Universities and Research Councils, appointments to 348
Computer Communication Ltd., motor vehicle route planning by computer 788
Computer control convention, UKAC 172
Computer-controlled anti-submarine warfare attack trainer, Honeywell 743
Computer-controlled cathode ray tube display systems 1141
Computer-controlled traffic scheme, Plessey Automation Group 535
Computer Controls Ltd., pressure transducers 71
Computer driven cathode ray tube displays, Ferranti 372
Computer languages dictionary 83
Computer methods for Chemical Engineer, symposium on (Nottingham) 776
Computer model-120 with memory speed 3 μsec per character, Honeywell 767
Computer program for turbine blade temperature 1070
Computer programming for science and engineering, by B. A. M. Moon (book) 817
Computer requirements of small firms 308
Computer service, for civil engineers 458
for NC drilling machines, Multiaid 398
low cost, CML 704
Computer Services (Birmingham) Ltd., satellite computer centre 150
Computer technology, conference on (Manchester) 382
Computerised Management Ltd., low cost computer service 704
Computing Centre, National, functions of 922
Computyper electronic invoicing machine 985
Comsat. *See* Communications Satellite Corp.
CONAG (combination of nuclear power with gas turbines) system 762
Concentrator, magnetic, for iron ore 644
Concise encyclopedia of heat transfer, by S. S. Kutateladze and V. M. Borishanskii (book) 37
Concorde supersonic airliner
air-conditioning generation systems 321
airframe testing programme 321
Anglo-French collaboration, Sir George Edwards 540
anti-icing equipment 321
construction methods 318
cost analysis 480
design and construction review 316
design philosophy 316
economics 322
electrical system 321
engine control system for BS593 Olympus engine powering, Ultra 405
flight control system 321
flight deck layout 321
for Middle East Airlines 1002
fuel system 321
hydraulic system 321
manufacture of radome 897
manufacturing breakdown and production-line time chart 317
navigation system 321
performance requirements 322
power plant details 321
production methods 319
structural design and materials 316
Concordia, C. CIGRÉ conference 16
Concrete
corrosion of steel in 850
for Western Avenue extension of A40 road 576
hardening, heating elements for 856
precast, National Building Frame structural system 232
Portsmouth Evening News building 972
trade publication 910
precast structures, design philosophy 910
prestressed, Dyform process for wire rope for 728. *Correction* 907
Greyfriars Bridge 360
motorway viaduct, Gateshead 311
runway extension at La Guardia Airport 881
Concrete additive, Wargonin 813
Concrete aggregate properties effect on strength, Highway Research Board 717
Concrete breakers, electric, Bosch 252
Concrete mixer, Speedex 5th 1075
Concrete pump, lorry-mounted, Squeez-Crete 638
Schwing ABP30 686
Concrete Society, formation and activities 312
functions of 699
inaugural meeting 699
Concrete units, lifting attachments for 120
Condensation in domestic boiler chimneys 103
Condenser, evaporative/fluid cooler 80
Condensing units, air-cooled, Carlyle 465
Conduit, electrical, of rolled-steel square section 648
Conduit clip, electrical, Klip-lok 862
Confederation of British Industry, annual dinner 136
Common Market report 1119
industrial trends survey 613
laundries price increase dispute 739
review of mechanical engineering trade associations 876
Conference
acoustic noise and its control 428
advances in electron microscopy 130
advances in printing technology 1078
air traffic control systems, IEE 302
annual, BACIE 572
automatic operation and control of broadcasting equipment 884
classification, coding and group technology 1036
coating of plastics with metals 1026
computer technology (Manchester) 382
copper in desalination equipment 416
Corrosion at Joints in Constructional Materials 470
dc power transmission (Manchester) 549
desalination as water supply source 624
electric power systems, CIGRÉ 16
electron probe micro analysis 1078
elementary particles 302
energy for new towns (Harrogate) 395, 838
Engineering in Medicine and Biology 130
Euston main line electrification 783, 793
Exhibition and, Engineering Materials and Design 864
Fluid Logic and Amplification (Cambridge) 470
forgings manufacture 336
frequency generating and control for radio systems 1078
gas turbine, ASME 864
guided land transport (IME) 797, 798
high pressure engineering, IME 256
high voltage dc power transmissions, IEE 172
high-voltage dc power transmission (Manchester) 583
human operator in complex systems 221
industrial physics and government sponsored laboratories 994
Industrial Training Act and Implications of Management 818
Industrialized Housing and the Architects 864
Industry and university collaboration, Liverpool University 52
Institute of Directors 874
International, aircraft noise (London) 961, 1001
Industrial Diamond (Oxford) 603
machine tool design and research 1112
Road Federation (London) 578
Underwater Activities 130
Women Engineers and Scientists (Cambridge) 734
Internationale des Grands Réseaux Électriques. *See* CIGRÉ
Karlsruhe international, on food irradiation 28
Labour Party (Brighton) 655
light and sight in industry 1048
marketing in United States (London) 1146
MF, LF and VLF Radio Propagation 172
microelectronics in equipment 302
National Inspection (Oxford) 172
National Power Farming (Harrogate) 650
national productivity 613
on-line measurement and inspection and their impact on quality 84
profiting by quality and reliability (Blackpool) 877
reinforced plastics (London) 1062
Scottish Materials Handling 38
Solid State Devices 172
spark discharge 382
stress analysis, RAeS 1078
strong tough structural steel 1036
structural steelwork 256
in bridgework and multi-storey buildings 676
thermophysics specialist 428
Towards More Creative Science 4
trends in training for skill, BACIE 1045
weld defects 910
Western Resources, Colorado 285
Congress
electro-heat (Brighton) 1036
engineer and economic and social progress, FEANI (Athens) 741, 776

International, on Magnetism (Boston, Mass.) 818
International Clean Air (London) 571
International Council of the Aeronautical Sciences 540
International Federation of Automatic Control 51
International Mining (Moscow) 692
profit by design (CoID) 703
Public Works and Municipal Services (Olympia) 853
Royal Aeronautical Society's Centenary (London) 540
Congress Europort '66 (Amsterdam) 875
Connector
cable and hose, rotatable, AEI 424
edge, for printed circuit boards, Aircraft-Marine 290
environmental electrical, Astro-348 series 403
pipe, for grain handling systems, Kongskilde 948
Sourian type-82 1072
sub-microminiature, Ultra Electronics (Components) Ltd. 70
trade publication 952
Connell, James N. Ltd., wire rope for dismantling bridge 313
Connolly, J. W. and T., tractor wheel conversion 1053
Conqueror class cargo ship 744
Conservation engineering, soil and water, by G. O. Schwab, R. K. Frevert, T. W. Edminster and K. K. Barnes (book) 515
Consett Iron Co. Ltd., steel requirements for nuclear submarines 311
Considere & Partners, Greyfriars Bridge 360
Consolidated Pneumatic Tool Co. Ltd., Air Scribe scribing tool 300
Duff Norton Type 228R mobile air-powered jack 421
pneumatic nut-runner, 3017ATN 464
Construction, composite, in Almondsbury interchange, D. S. Bondale and P. J. Clark 678
S. G. Silhan and R. C. Westbrook 679
R. C. Westbrook 680
industrial (trade publication) 336
sandwich, by F. J. Plantema (book) 775
Construction equipment, mechanical (trade publication) 910
Construction equipment demonstration (Hurn) 637
Construction Equipment & Machinery Co. (GB) Ltd., masonry saws (trade publication) 818
Construction industries overseas contracts, statistics 656
Construction Industries Research and Information Association, arguments against formation 568
Construction industry, computers for 102
licensing effects in 829
Construction Industry Economic Development Council, report of 829
Construction Industry Training Board 225
grants scheme for 266
newsletter 527
Constructional materials, corrosion at joints in, conference on 470
Constructors John Brown, EELM computer design scheme 661
electrolytic sewage treatment plant 621
Consultancy by academic staff on behalf of firms 53
Consultant services, availability of. *Letters* 186, 272, 623
Container(s)
aluminium, Multiload 940
demountable, Abel Air 1123
export, air freight 788
Fix-Box 900
freight, general purpose, Duramin 31, 299
International Standard size considerations 875
manufacturer's point of view, A. de Senneville 924
plastic, filling, sealing and trimming automatically 943
refrigerated, Voorwarts 942
semi-bulk (trade publication) 130
semi-trailer, Challenger T 507
standardization 925
of freight 1047
Container barge systems 925
Container cargo handling in Finnlines roll-on/roll-off ships 1102
Container handling, C. D. Ramsden 926
Container handling development at Tilbury 917
Container handling equipment, Anderston 209, 703
Paceo Portainer systems 725
Container handling system, Paceco 926
Container pump for aggressive liquids, British Central Electric 374
Container ships, British Railways 441
cellular, BR 925
designs, P. R. Salisbury 925
A. Rogan 924
Container transfer unit, Murfitt 506
Containerized cargo, handling, mast cranes for, Atlas 938
Containerized waste materials handling equipment, Dumpster, Dinosaur and Dumpmaster systems 506
Continental Hydraulics range of valves and cylinders 560
Continental Oil Co., refinery at Immingham 278
Continuous D-Hydrator automatic pusher centrifuge 857
Continuum mechanics, by C. Truesdell (book) 775
'Contourmatic' milling machine (trade publication) 256
Contract, BMEF handbook on terms of 1042
road construction, tendering for 7
Contractors plant industry, output and order trends 437
position and prospects 1086
Control
automatic
Congress of International Federation of 51
in ships, recommendations for 788
in space, symposium (Vienna) 562
tanker *Dolabella* 58
theory, basic, by G. J. Murphy (book) 817
economy, technological progress, Vadim Trapeznikov 51
gas (trade publication) 650
high-temperature, White-Rodgers Ltd. 163
optimal and self-optimizing, by R. Oldenburger (book) 469
solid-state, for induction heating 1104
trade publication 1146
Control box, oil burner 73
Control centre, electrical power generation, France 57
Control devices, counting and, Uniprint Module and Uniprint Platen 906
Control equipment in cargo ships 1013, 1014
Control gear, small, television advertising, AEI 783
Control systems, automatic, identification in, symposium (Prague) 562
card-program, Fukuyama steelworks 489
fluid (trade publication) 172
Fluidic 528. *Letter* 707
for reheating furnace 325
linear automatic, with varying parameters, by A. V. Solodov (book) 301
optimal adaptive, by D. Sworder (book) 469
powered remote, Dynamaster II 559
remote, for tractors 1065
Wiggins Teape Fort William 498
Control unit, marine, Teleflex K11 967
Controller, four-channel temperature and time 70
indicating, Scanline 71
Controller units, driver and (trade publication) 994
Controls Co. of America, house on factory roof for testing heating and air-conditioning units 620
Contromatic Ltd., Timatic Mk. 11 time switch control 332
Convector(s), fan, hot water (trade publication) 692
warm-air, Portway Trio 351
Convention, Exhibition and, Effluent and Water Treatment (London) 1036
Converter, binary-decimal, Ether Engineering 730
Converter station, Codrongianos, for power transmission line to Sardinia 1094, 1097, 1098
Conveyor
and elevator equipment (trade publication) 84
coal, from mine, Longannet power station 1017
document, Single Line Junior 380
Lautovick system 926
Miniway 248
pneumatic, Berk-Gatty system 808
sorting, automatic, Sortrac III 945
Conveyor systems, Airtube (trade publication) 994
Conway, H., committee to coordinate gas turbine aircraft engine policy 436
Conway, J., general secretary AEU 658
Coolants, organic, and moderators, by O. Vojtech (book) 733
Cooler, fluid/evaporative condenser 80
fresh water and lubricating-oil, Yorkshire Imperial Metals 941
Hot Rod, Scott McQuay 1144
Cooling of underground cables 1009
Cooling device for semiconductor devices, NBS 246
Cooling elements, Peltier, Siemens 966
Cooling systems for cargo ships 1012, 1013
Cooling tower(s), Ferrybridge C power station, report of inquiry 399
Cooling tower failure at Ferrybridge power station 351
Cooling tower packing (trade publication) 608
Cooling water pump motor, noise from 640
Cooper, C., former editor, 'Engineering' 312
Cooper Electroheat Ltd., heat controlled welding 509
Cooper S motor car, Downton 801
Cooper & Turner Ltd., Coronet high strength friction grip bolts and nuts 208
Co-operative Wholesale Society, Hytafill can contents checking equipment 509
Copper in desalination equipment, conference on 516
Copper-coated steel strip, Armco-Pittsburgh SA 908
Copper Development Association, conference on copper in desalination equipment 516
Copperad Ltd., Monarch gas fired space-heating units 440
Copycat Ltd., copying machines 597
Copying machines, Business Efficiency Exhibition 595
electrostatic, ADM 251
Anson Universal Minolta Fax 41 328
review of processes 595
review of types 597
Xeroduplicator 685
Corbet, A. G., on Ship Stabilizers (book) 301
Cordon, safety, Florina 579
Core(s), water soluble, for pistons 148
Core drill, diamond, for sampling asphalt 1135
Cork, crown, bottle closure, Triple Seal Crown 1123
Corner, W. D., magnetostriction 780
Corning Electronics, glass capacitors (trade publication) 336
Corning Glass Works, N.Y., fluidics summing junction 376
radiation shielding windows (trade publication) 1146
Cornubian Construction Co. Ltd., BBC-2 relay stations 230
Cornwell, P. B., quarantine by irradiation 28
Coronet high strength friction grip bolts and nuts 208
Coronet load indicator 208
Correspondence course on steam engineering 915
Corrosion
at joints in constructional materials, conference on 470
fundamentals of, by J. C. Scully (book) 129
in furnaces, ASME meeting 1064
of aluminium electrical wires 293
of steel in concrete 850
Corrosion cracking, stress, of titanium alloy 204
Corrosion inhibitor, Fernox Crystal 248
Corrosion prevention of structural steel, BS 704
Corrosion-resistant materials, plastics as, by V. Evans (book) 1111
Corrugating machine for board 763
Corsair II aircraft, Spey engine for 227
Corsario Negro, 'open ocean' hydrofoil craft 1050
Cortina motor car modifications, Ford Motor Co. Ltd. 710
COSAG (combined steam and gas turbine) system 762
propulsion machinery for Type 82 destroyer 661
Cosiclad chimney, Birds Eye Foods 103
Cossor VHF radio telephone 1011
Costain, Richard, (Civil Engineering) Ltd., Almondsbury motorway interchange 275
Cosworth F3 racing car engine 358
Cottam power station, turbine automatic control equipment systems 534
Council of Engineering Institutions, comments on role of 919
Common Examination syllabus 483
examinations and joint entrance arrangements *Letters* 746, 883

meeting with Federation of European National Associations of Engineers 741
Royal Institution of Naval Architects member of 137
Council of Industrial Design, congress on profit by design 703
Design Centre Awards for capital goods 54
instrument exhibition 715
International Design Congress 256
Council for National Academic Awards, proposals for higher degrees 136
Counter
batch, Radiatron 1072
bottle, Trumeter 862
decade, circuit board 27
digital, frequency measuring equipment, Venner 403
Geiger-Muller 384
print-out (trade publication) 818
proportional 384
scintillation 385
surge, AEI 291
Counting, and control devices, Uniprint Module and Uniprint Platen 906
Low-Level, Radioactive Dating and Methods of (Vienna), symposium on 608
Counting machine, banknote, De La Rue 253
County Commercial Cars Ltd., forward control tractor 638
Coupler, hydraulic, quick-action, Pioneer 1139
Coupling
compression, for plastic or glass tube, Simplifix 814
Instanter type, for coal hopper wagons 416
pipe, high-pressure, Ermeto 560
plastic, for vitrified-clay drainage pipes 121
self-sealing, Hansen Quick-Connective 559
shaft, Schmidt 1071
see also Clutch
Coupling device, cushioned, for railway wagons, FreightMaster 1024
Courier packet-sized radio telephones 405
Course, correspondence, on steam engineering 915
film loop instruction 662
in low-cost automation, PERA 568
post-graduate, mutual interest in 53
statistics, Cranfield 270
Courtaulds Group, FST packaging machine 943
Courtaulds Red Scar Works, Celmar plastic ducting 851
Cousins, F., resignation as Minister of Technology 47
Coutant Electronics Ltd., pressure switch 162
Coventry Gauge and Tool Co. Ltd., grinding machines (trade publication) 130
Matrix No. 50 jig-boring machine 725
Coventry Victor 'Vixen' engine in underground vehicle 330
Covers, zip, for Centurion battle tanks 681
Cox, E. S., gas-turbines for rail traction 828
on British Railways Standard Steam Locomotives (book) 1145
CP conservation law, abandonment 75
Crack(s) in steel hull of Polaris submarine, *Resolution* 574
Cracking, stress corrosion, of titanium alloy 204
Cradles, boiler, Thomas 724
Craft occupations, analysis of, Perkins Engines Group 266
Craft practice and theory, mechanical engineering, Part 1, by N. E. Langdale (book) 129
Craft training, module system of 1045
Craftsman in metal, by R. Lister (book) 83
Cramic/Ferranti machine tools for Concorde airliner 319
Crane(s)
boom (trade publication) 172
container handling 209
diesel-electric, Dominant Mobile 940
engine room, Atlas Copco 158
for acetic acid plant 1090
mast, for handling containerized cargo, Atlas 938
mobile, Pickering Pioneer 5 ton 168
overhead travelling, Carruthers 495
tower, Stothert and Pitt 79
trade publication 692
truck mounted, hydraulically controlled 80
Crane Fruehauf Trailers Ltd., 120 ton trailer 422
step-frame semi-trailers 1143
Crane, M. A., Presidential Address to the Institution of Locomotive Engineers 576
Cranfield College of Aeronautics, statistics course 270
Cranfield Society, training of technocrats 137
Crankshaft repair technique 396
Cranwell College, engineer training at Trenchard Hall 618
Crash testing techniques, motor car, Fiat 315
Cravens Homalloy, high speed loading of milk bottles 441
Crawler tractor and bullgrader, International Harvester 1034
Crawley Engineering Developments, stable hole elimination equipment 55
Creda range of Electricair ducted heaters (trade publication) 336
Credit squeeze, unemployment due to 345
Creep in engineering structures, by J. Hult (book) 909
Cremer, M., Information Scientists' conference 140
Cripps, R. and Co., Rolls-Royce Eagle diesel engines 102
Critchley Bros. Ltd., terminal block 990
Criterion Business Machines, Versatil copying machine 597
Critical path analysis: problems and solutions, by K. G. Lockyer (book) 775
Croasdale, K. R., foam-plastic sheet for structural models 34
'Crofon' fibres, Du Pont, in fibre optics lighting system 620
Cromack, Benjamin, Ltd., air heating (trade publication) 650
Cromp-Arc 500 stud welder 166
Crompton Parkinson Ltd., battery production 897
Cromp-Arc 500 stud welder 166
lighting equipment (trade publication) 994
oil filter (trade publication) 214
Cromwell by-pass, slip-form paving machine trials 1076
Cronaflex contact positive film 249
Croney, D., award by Institution of Civil Engineers 434
Crop-Hopper multi-tool carrier 147
Crosland, A., launching of *Project* journal 1
Cross, real loading on structures 676
Cross Cut sludge lifter for sewage treatment 790
Cross Manufacturing Ltd., sealing ring 72
Cross-tying machine, newspaper, Sheridan 1034
Crossley, Henry, (Packings) Ltd., materials for unlubricated reciprocating compressor 419
Crown cork bottle closure, Triple Seal Crown 1123
Cruachan pumped storage plant, shear pins failure 1018
Cruger, F., management techniques 830
Cruickshank, K., meeting Britain's power needs 487
Crusher, rock, jaw-type, Kue-Ken 642
Crusher demonstration unit, G.E.C. 854
Crusher plant, Logicon switching system for 1105
Cryogenic insulation, Dimplar 600
Cryogenic vessels, design and construction 523
Cryogenics
applications 518
definition of 517
Engineering Outline 517. *Letter* 623
importance and uses 517
in nuclear research 519
Crystal lamps, dc eletroluminescence and 46
Crystic polyester resins (trade publication) 1078
Crystic 189 reinforced polyester for sewage effluent measuring flume 764
Cubicles, switchboard (trade publication) 1146
Culligan Inc., Aqua 1 water purifier 1074
Aqua-Sensor water softeners 1074
water deionisers 1074
Cunard Q4 liner, automation in 11
Curie temperature for ferromagnetics 778
Curing system for aircraft sealant 311
Curran, P. F., on Nonequilibrium Thermodynamics in Bio-physics (book) 213
Curtain-wall structures, joint movements in 128
Cuss Group, floating drilling development 587
Cuss I drilling rig 587, 589
Cut-to-length line for coiled aluminium strip, Humphris 987
Cutler-Hammer hole detector 497
Cutlery, production mechanization, Viners 294
Cutters, granulator, Spruemaster 248
Cutting, and welding equipment, Saffire-3 602
friction and, metal transfer and build up in, by V. D. Kuznetsov (book) 255
of evaporator for SS *Chusan* 169
oxy, equipment, IGE Mark Century 100S 985
Cutting machine, asphalt, Errut 605
bar and tube, Bimax 465
oxygen, Hancoline HL2B 939
wire stripper and (trade publication) 1078
Cutting oils, selection and purchase of 636
Cutting uranium carbide, diamond blades for 1025
Cycle. *See* Bicycle
motor. *See* Motorcycle
Cyclone(s), dust abatement and recovery, Ambuco 688
Cyclone 70 tool steel 289
Cyclone trim handling equipment (trade publication) 256
Cyclotron
definition 472
description of 474
principle of 474
sector-focused 949
uses 475
variable-energy, AERE, Harwell 949
Cyclotron frequency, definition 475
Cylinders, compressed-gas, Chesterfield 405
Continental Hydraulics range of 560
pneumatic, Maxam All-Square 1133
Plan-6 642
Cywinski, J. W., spraying of plastics 1026

D

DAF, exhibits at Commerical Motor Show 580
Daf town motor car, OSI 888
Daf-44 motor car, description of 627
Daily, J. W., on Fluid dynamics (book) 83
Daimler Hire Ltd., ultrasonic vehicle washer 187
Daimler Sovereign motor car 713
Dairy Engineering Exhibition 302
Daltolac foam-making chemicals 246
Daltolac 60, rigid urethane foam 370
Dam(s)
Brouwershaven, Netherlands Delta Plan 119
Clywedog, buttress design 756, 758
design and construction 755
Delta Plan, Netherlands 113
Grevelingen, Netherlands Delta Plan 115
Hales Bar, history of 974
Nickajack, construction progress 973
construction requirements 975
construction sequence 976, 978
temporary cofferdam construction, 976
Volkerak, Netherlands Delta Plan 117
Damon, A., on Human Body in Equipment Design (book) 427
Danby, G. R., magnetic levitation of railway trains 1123
Danforth Mk 111 anchor 158
Danfoss (London) Ltd., ignition transformer 773
thermostatic water valve 207
Danfoss (Nordborg), controls (trade publication) 1146
Daniel, A. W. T., channel tunnel 922
Danube VIII, tug, collision of 835
Danuser Digger dual-purpose tractor-mounted borer 858
Dart Valley Railway, private-enterprise commercial railway 1049
Data, presentation of, symposium on (Middlesbrough) 1146
Data-logging equipment
cargo ships 1014
railway track condition recording and maintenance system 190
ships 11
Richardsons Westgarth system, 981
Data print, OCR-A and OCR-B, relative advantages 968
Data processing, by H. P. Hartkemeier (book) 515
Data processing unit accessories, Pencil Follower 858
Data recording system, aircraft integrated, Midas 404
Data tape recorder with simplified tapedrive, Honeywell 1031
Dating, Radioactive, and Methods of Low-Level Counting (Vienna), symposium on 608
Datsko, J., on Material Properties and Manufacturing Processes (book) 1035
Davall Electronics Ltd., miniature potentiometer Type-72 1029
potentiometers (trade publication) 1112

Davall Gear Co. Ltd., Bantam speed reducers 989
15-speed precision spur gearbox 1140
PowerGrip standard pulley drive 905
Davey, Paxman and Co. Ltd., diesel engines (trade publication) 994
filtering catalysts 551
Davidson, J. W., structural steel in industrialized building 680
Davies, D. S., industry and university collaboration 53
Davies, Lord Justice Edmund, Averfan coal tip disaster inquiry 1004, 1048
Davies, J. R., Information Scientists' conference 140
Davis, John, and Son (Derby) Ltd., dual range ohmmeter 290
flameproof siren 462
relay/transformer units 643
Davy and United Engineering Co. Ltd., 120 ton trailer 422
Davy and United Instruments Ltd., tube inspection equipment 641
Davy and United Roll Foundry Ltd., Froriep D850 IV mill-roll lathe 1067
Dawe Instruments Ltd., frequency meters for monitoring power supplies 292
stroboscopes 134
ultrasonic welding of plastics 850
Dawley New Town, plans for expansion 874
dc power transmission lines. *See* Power transmission lines
DEA-Scholven GmbH, Allplas plastic balls 275
Dean and Wood (London) Ltd., Scott McQuay Hot Rod coolers 1144
Dearing, G. E., development in East Midlands 481
De Barr, A. E., foam-plastic sheet for structural models 34
De Beers, EMB diamond grit 1135
metal clad diamond abrasive 286
Decade counter circuit board 27
Decalcomania, temperature recording, Temp-Plate 248
Decca Navigator equipment 1011
Decca Radar Ltd., Decca 101 radar for small boats 1088
Decca True-Motion radar 1011
Decimal coinage, White Paper on 1041
Decks, bridge girder, orthotropic, P. J. Dowling 677
Deere, John, 710 Massey-Ferguson tractor 146
Defense Electronic Inc., TR-109 voice receiver 417
de Ferranti, S., IEETE dinner 698
Deformation of metals during rolling, by I. Ya. Tarnovskii, A. A. Pozdeyev and V. B. Lyashkov (book) 909
Degassing plant, vacuum, for plate steels 983
De Graaf, J. E., model tests on furnaces 807
De-icing system, Concorde airliner 321
Deionisers, water, Culligan 1074
Delapena and Son Ltd., induction heating equipment 724
De La Rue Frigistor Ltd., portable medical refrigerator 458
De La Rue Instruments Ltd., banknote counting machine 253
Delavan-Watson Ltd., spray nozzles fitting to spray booms 639
Delay line, colour TV, Mullard 249
magnetostriction in 777
Delay unit, time, Brookhirst 332
Delco-Remy transistor ignition system 543
Delora Stellite Ltd., tipped tools (trade publication) 516
Delta Controls Ltd., pressure/resistance analogue transducers 1107
Delta Machine Services Ltd., rotary transfer machine (trade publication) 256
Delta Plan for flood prevention in Netherlands 110
Delta satellite launch vehicle 935
Demagnetizing unit, Emag-8, Sonatest 207
Demarcation disputes in shipbuilding industry 267
Demers, George, Trois-Rivieres Bridge 1100
Dempster lorry mounted equipment 506
Denison Deri Ltd., axial piston pumps 559
Dennis, fire-fighting appliances 365
Denny, Sir Lionel, Chancellor, City University 659
Denso anti-corrosion products (trade publication) 776
Dental instrument carrier, Satellite 485
Department of Education and Science, *Project* journal for schools 1
Deranox alumina ceramics (trade publication) 650
Derby, industrial position and prospects 349
refuse incinerator for 750
Derwent Electronics Ltd., Neptune track condition recording and maintenance system 190
Desalination, as water supply source, conference on 624
principles of, by K. S. Spiegler (book) 469
seawater, by nuclear reactors 533
comment on 281
water, nuclear power for 675
Russia 1105
Desalination equipment, copper in, conference on 516
Desalination plant, General Dynamics 550
De Senneville, A., containerization 924
Desford brick factory, NCB 377
Desiccant drier filters, Pall 333
Design, and Materials, Engineering, Exhibition and Conference 864
by computer in shipbuilding industry 661
electrical power system, advance studies in, by R. A. Hore (book) 36
engineering, by T. F. Roylance (book) 427
computer-serviced facility 661
Feilden Report on, implementation progress 189
plastics, seminar (Cranfield) 994
equipment, human body in, by A. Damon, H. W. Stoudt and R. A. McFarland (book) 427
mechanical engineering: an introduction, by G. D. Redford (book) 129
profit by, congress on (CoID) 703
steel structures, regulations for, S. F Sfintesco 676
Design Centre Awards, capital goods section 54
Design Congress, International, Council of Industrial Design 256
Design criteria for metal compression members, guide to, by B. G. Johnston (book) 561
Design philosophy and precast concrete structures 910
Designers, industrial, training of 703
Designers' manual, steel (book) 909
Desk calculators, electronic, matrix assemblies for, Mullard 334
Desma 609 injection moulding machine for footwear 356
Desoutter Bros Ltd., auto-start pneumatic screwdrivers 557
torque controlled spanners 557
Dessicators, water absorption, Olin 559
Destroyers, for Iranian Navy 762
guided-missile, Type-82 661
COSAG system for 762
Devcon Ltd., Flexane flexible polyurethane for short-run mouldings 1134
Developing countries, productivity in rural areas. *Letter* 1006
Development of technical education in France: 1500–1850, by F. B. Artz (book) 1111
Development districts, training aid in 180
Development Securities Ltd., Hunslet East oil rail terminal 1009
DeVilbiss Co. Ltd., QZ spray-painting cleaning unit 426
Superwash spray booth 167
Dewar, James M. & Sons Ltd., ferries for Portsmouth–Gosport service 283
Dewrance Controls Ltd., three-way solenoid valves 948
two-way solenoid valves 426
DIA Invest Export, Draweba automatic wire netting machine 1110
Dial, dual-reading machine tool, metric imperial translating drum 814
inch/metric, for machine tools 246
machine tool, dual English/metric, Elliott 989
precision, multi-turn, Micro-Clockdial, US45, and Flash-22 463
Dial caliper, Rabone 253
Dial test indicator (trade publication) 776
Dialysis in membrane separation processes 1113
Diamond, Industrial, Conference, International (Oxford) 603
trade publication 382
semiconducting, for thermistor 1104
Diamond abrasive, metal-clad, RDA-MC 286
Diamond blades for cutting uranium carbide 1025
Diamond coredrill for sampling asphalt 1135
Diamond cutters, milling of refractory materials with 603
Diamond element, thermistor with 205
Diamond grinding points, Cavidrill 422
Diamond grit, De Beers EMB 1135
development and application 603
Diamond Research Laboratories, activities of 603
metal clad diamond abrasive 286
Diamond-tipped surgical instruments 397
Diaphragm valve in fluidics 565
Dick, A. B., Co. of Great Britain Ltd., copying machine 598
table-top offset duplicator 684
Dick's Asbestos and Insulating Co. Ltd., insulating pipes 418
Dictaphone Co. Ltd., Europa dictating machine 684
Dictating machine, Europa 684
transistorized, Fi-Cord 212
Dictionary, aeronautical technical, by H. W. Groves (book) 381
of building materials, by W. Kinniburgh (book) 649
of electrotechnology: German–English, by E. Höhn (book) 1035
of inventions and discoveries, by E. F. Carter (book) 863
Didcot power station 237, 240
Diddington Reservoir. *See* Grafham Water reservoir
Die-casting machines, and plastic mouldings 1008
hot-chamber, EMB 1033
Die-grinder (trade publication) 516
Dielectric, mixed paper/polyester, rectangular can capacitor using 730
Diels, K., on Leybold Vacuum Handbook (book) 649
Diesel alternator. *See* Alternator
Diesel engine. *See* Engine
Diesel generator. *See* Generator
Diesel locomotive. *See* Locomotive
Diesel multiple-unit trains. *See* Railways trains
Differential pressure measurement, Fischer and Porter 417
Differential transmission systems
advantages 651
applications 654
basic principle 651
basic types 651
casing reaction type 652
definition 651
disadvantages 651
double 652
multiple-path 654
properties 651
shunt 651
single 652
split torque 651
Diffraction gratings 911
Digesters, in pulp production process 496
wood-chip, Balfour 811
Digikit electrical scale-changing modules 1029
Digimeter, digital voltmeters 291
Digital counter frequency measuring equipment Venner 403
Digital voltmeters, Sercel 291
Digitizer Techniques Ltd., pre-wired switch assemblies 71
Dimensional stability in gauge materials 246
Dimmer, light, and speed control, thyristor controlled, ADAP 463
Dimplar cryogenic insulation 600
Dino Spider, motor car, Fiat 841
Dinosaur containerized waste materials handling equipment 506
Diode(s), germanium, automated assembly, AEI 899
vacuum tube, microscopic 805
zener, Semiconductorkit 803
Zecon 1139
Diplomat-44 boiler for swimming pools 661
Direction finder, Lodestar 859
Direction finding, Engineering Outline 303
Directory of nuclear reactors (book) 993
Discoveries, inventions and, dictionary of, by E. F. Carter (book) 863
Dishwasher, turbo-jet 967
Dispenser, coinless, and refrigerator vending machine, Bell Captain 880
Dispersion hardened metals, properties of 996
Dispersion hardening, cermets in 432
Display systems, computer-controlled cathode ray tube 1141
fundamentals of, by H. H. Poole (book) 335
Dispro Ltd., adhesive for cartons using polypropylene laminated films 1138

Distillation plant, multi-stage flash 624
Distiller Industrial Solvents Division, crane for acetic acid plant 1090
Distillers Chemical and Plastics Group, acetylene production plant, Hull 60
Distillers Chemicals and Plastics Ltd., 'natural break' tea breaks 145
training in Industrial Solvents Division 878
York refrigeration unit 986
Distington Engineering Co., Berk-Gatty system pneumatic conveyor 808
vacuum degassing plant for plate steels 983
Distribution system, Tridax 110-V 1106
District heating, by F. B. Turpin (book) 775
for new towns 838
oil fired, for Highland Holiday Centre, Aviemore 922
Rowlatts Hill scheme, Leicester 748
District Heating Association, formation and aims of 223, 395
Diving bell, Capshell 593
Dixon-Rolt Development Co., activities of 412
D-mac Ltd., Pencil Follower data processing unit accessories 858
Dock(s), Hull, end-loading berths for 227
Southampton, ocean terminal at 544
Dock gate for Ghana 230
Document conveyor, Single Line Junior 380
Document handling, Sovex system, CEGB 145
trade publication 994
Dolabella tanker, automatic control in 58
Dolphin, submarine escape training, deaths 574
Domestic appliances (trade publication) 910
Dominant Mobile diesel-electric crane 940
Dominion Bridge Co. Ltd., Toronto-Dominion Bank Tower 844
Trois-Rivieres Bridge 1100
Donovan Electrical Co. Ltd., Edytect Switch automated limit switch 425
Door(s), airtight steel, Trox 648
fire resistance of 457
folding, Paragon Pividor (trade publication) 470
sound-resistant steel, Trox 648
Door catches, magnetic (trade publication) 336
Dorman Long (Bridge & Engineering) Ltd., automatic positional control for plate rolling mill 640
Severn Suspension Bridge 456
Dorman Long & Co. Ltd., merger announcement 958
Dorman, W. H., and Co., Monair 2 monobloc compressors 552
Dormeyer Industries, Super series control solenoids 250
Dorseal warm air curtain 731
Double glazing (trade publication) 428
Douglas Aircraft Co., Delta launch vehicle 935
Douglas DC-8 Super 62 jet aircraft 440
Dounreay fast reactor 1150
Dow Corning International Ltd., silicone rubbers 1106
DOWB two-man submersible vehicle 314
Dowling, P. J., steel-plate girder decks 677
Downton, Cooper S motor car 801
MGB motor car 801
Dowson, D., on Elasto-hydrodynamic Lubrication (book) 561
Dowty Electrics Ltd., magnetic indicator 773
Dowty Seals Ltd., piston head and rod seals 862
urethane rubbers (trade publication) 994
Doxford, William, & Sons, accident in propeller shaft tunnel of ship 835
Doye, G., dynamic metrology in printing 599
Dracone Developments Ltd., butyl rubber 'pillow' tank for storing liquids 982
Drafting system, tape controlled, Livingstone 468
Dragon cross-channel car ferry 396
Dragon high temperature reactor project, 371
Drain laying machine, Landraner 576
Drainage, HepSleve system of 121
Drainage pipes, vitrified-clay, plastic couplings for 121
Draughting machines, automatic, use in shipbuilding 1023
Draughtmen's & Allied Technicians Assoc. national agreement policy 827
Drawbar pull measurement, earth-moving plant, MEXE 638
Draweba automatic wire netting machine 1110
Drawing, 3-D scale, by C. K. Clutterbuck (book) 1077
Drawing machine, automatic, Ferranti 227
Drawing racks (trade publication) 818
Drax power station 1084
coal supply for 415
generating plant 236
Dredger, *Seaverodvinksi*, trials 744
Dredging & Construction Co. Ltd., Grafham Water reservoir 154
Drier, rotary drum, Kestner 986
see also Dryer; Drying
Drill, core, diamond, for sampling asphalt 1135
grain, Allis-Chalmers 1053
rock, lightweight, Holman 945
turbo, for North Sea explorations 228
Drill chucks (trade publication) 516
Drill grinding machine, Brunner 902
Drill press feed, Bellows 426
Drill Service (Horley) Ltd., Cavidrill diamond grinding points 422
solid-carbide end mills 606
Drilling bits and accessories (trade publication) 130
Drilling clamp (trade publication) 1078
Drilling machine, numerically controlled, Asquith 2HD horizontal (trade publication) 38
computer program 398
Drilling platform trials, *Sea Quest* 55
Drilling rig
Bluewater-II 587, 589
Cuss-I 587, 589
Eureka 589
in North Sea, *Ocean Prince* 229
Sea Quest 229
Orion 1088
Drilling tables, multi-head, Startrite 513
Drive, roller ratchet, for synchronous motors, Ferraris 462
standard pulley, PowerGrip 905
thyristor controlled variable speed, Clarke Chapman 425
variable speed, Howe 1029
Drive belts (trade publication) 994
Driver and controller units (trade publication) 994
Driving, high performance, for you, by T. Wisdom (book) 469
Drum handling equipment (trade publication) 692
Drum Master handling equipment (trade publication) 692
Drum washing plant, Armstrong 513
Drummond-Asquith Ltd., drilling machine (trade publication) 38
DRUPA International Fair, printing and paper (Dusseldorf) 1078
Dry-reed switches, Kynmore 814
Dryer, grain, Multivac, Ransomes, Sims and Jeffries 147
See also Drier; Drying
Drying, freeze. *See* Freeze drying
grain, and storage trends 1052
Drying plant, fluid-bed, for coal, Heyl 808
Drypool Engineering & Drydock Co. Ltd., Brons diesel engine 942
Drysdale & Co. Ltd., Duomac rotary gear pump 126
Pelican range of pumps 159
Dual edge connectors 290
Dubied 517 3¾ in, copying lathe (trade publication) 302
du Cann, E., chairman Conservative Party 697
Duckham, Alexander, and Co. Ltd., Adsil-Two silicone release agent 331
Duckworth, J. C., annual report of NRDC 346
Duct rodding machine, GPO 1133
Ducting, plastic, Celmar 851
Dudley, N. A., head of Department of Engineering Production at Birmingham University 179
Dudley, P. D., supervisory training 139
Duff Norton Type 228R mobile air-powered jack 421
Duffin, D. J., on Laminated Plastics (book) 301
Dufton, J., on Building Regulations (book) 37
Dulux Electrocoat electro-deposition system (trade publication) 470
Dumpmaster system containerized waste materials handling equipment 506
Dumpster system containerized waste materials handling equipment 506
Duncan, K. L., value of road lighting 619
Duncan Logan (Contractors) Ltd., Tay road bridge 312
Wiggins Teape paper mills, Fort William 495
Dungeness A nuclear power station, siting considerations 670
Dungeness B nuclear power station
construction details 64
design aspects 64
foundation works 64
gas-cooled nuclear reactor for 656
magnox canned fuel element 66
pressure vessel 64
reactor design 67
site plan 66
660 MW turbine generator sets 67
turbine hall, 67
Dunlop Footwear Ltd., Desma 609 injection moulding machine for footwear 356
Dunlop Rubber Co. Ltd., pyrometer for tyre temperature measurement 74
Dunn, J. M., on Reflections on a Railway Career (book) 733
Dunner, E., Euston main line electrification 794
Duodec Development and Construction Co., silos for gypsum rock and perlite storage 1135
Duolock control unit in Ferguson R5 motor car 414
Duomac rotary gear pump 126
Duomatic 06-32 levelling and tamping machine 448
Duoteric inhibitors for acids (trade publication) 650
Duplex compressor, Motivair 297
Duplex exhaust emission control system 660
Duplicator, offset, table-top, Dick 684
Du Pont Co., 'Crofon' fibres in fibre optics lighting system 620
Cronaflex contact positive film 249
Nomex nylon overalls for racing motorists' protection 274
Durafloat '12' moulded plastic boat 835
Duramin Engineering (Lydney) Ltd., general-purpose freight container 31, 299
Duramin Ltd., trolley for Finnflow cargo-handling system 1102
Durapack plastic replacement packing (trade publication) 608
Durham, D. G., diamond-tipped surgical instruments 397
Durney, W. C., on Machine shop practice (book) 83
Dur-Ni nickel coating for bumpers 1123
Dust abatement and recovery cyclones, Ambuco 688
Dust Control Ltd., dust control plant 467
Dust control plant, Dust Control Ltd. 467
Dust separators, cyclone, Velocone range of (trade publication) 734
Dutton, F. L., on Jigs and Tools for Schools and Colleges (book) 733
Duty remission scheme abandoned 615
Dyer, H. B., diamond grits 603
Dyform process for wire rope for prestressed concrete 728. *Correction* 907
Dyform wire rope, British Ropes Ltd. 972
Dynacarb analyser for carbon in steel 600
Dynajet cleaner for pipe (trade publication) 516
Dynajet Engineering Co. (London) Ltd., pipe cleaning (trade publication) 516
Dynamaster II powered remote control system 559
Dynamic metrology in printing, G. Doye 599
Dynamic torque tracer for testing Rotenoid rotary solenoids 850
Dynamics of vibrations, by E. Volterra and E. C. Zachmonoglou (book) 213
Dynamometer, automatic, Hill 329
Dynamometer vehicle, MEXE 638
Dynex Co. Ltd., Dynamaster II powered remote control system 559
Dyson, R. A., & Co. Ltd., Trailsteer semi-trailer 505

E

Eagle diesel engines, Rolls-Royce 102
Early Bird satellite 932–937
Earth, reinforced, *La terre armée* 681
Earth compactor, Jumping Jack 79
Earthmoving (trade publication) 994
Earthmoving plant drawbar pull measurement, MEXE 638
East Germany, Profile of, L. Hornsby 469 *Letter* 574
East Midlands, planning and economic development proposals 481
East Midlands Gas Board, natural gas for Killingholme plant 714
East Midlands Management Centre, seminars 99
Eastman Kodak, Lunar Orbiter spacecraft 1128

Echo-sounding systems, applications 304
Econmobile hydraulic loader 298
Economic crisis, comment of 135
deflationary measures 181
Economic Development Committee, advantages of, A. Albu 742
Economic Development Committee for Chemical Industry, aims of 742
Economic Development Committee for Mechanical Engineering, bulletin on short-term trends 1086
duty remission scheme abandoned 615
report of 433, 437
Economic Development Council, construction industry, report of 829
Economic Foundations Ltd., McAlpine hydraulic augur boring rig 946
Edbro Ltd., high speed loading of milk bottles 441
hydraulic tipping gears 506
Edco grinding machine for concrete, stone or steel 212
Eddison, R. T., scientific management activities 4
Eddy-current testing of tube 641
Eddy current unit 378
Edels, industry and university collaboration 53
Edge connectors, for printed circuit boards, Aircraft-Marine 290
Ferranti 604
Edgwick automatic face cutter grinding machines 123
Edgwick tool and cutter grinding machine 123
Edinburgh, H.R.H. The Duke of, Association France–Grande Bretagne 1119
Edminster, T. W., on Soil and Water Conservation Engineering (book) 515
Edmonds, R., industry and university collaboration 53
Education, need for defined standards in 572
science, technology and management, Lord Kings Norton 1000
technical, in France: development of, 1500–1850, by F. B. Artz (book) 1111
Education requirements for electrical manufacturing industry 141
for mechanical manufacturing industry 141
Education system in England and Wales, Training Officer's Guide to, by C. Steers 178
Education and Training Requirements for the Electrical and Mechanical Manufacturing Industries (report) 141
Edwards, A. P. J., Information Scientists' conference 140
Edwards Bros. (Tippers) Ltd., hydraulic tipping gears 506
Edwards, F. J., Ltd., acquisition by George Cohen Group 828
Edwards, Sir George, Anglo-French collaboration 540
Edwards, K. C., development in East Midlands 482
Edwards, Lawrence, and Co. (Engineers) Ltd., Swathomatic triple-nozzle spray head 814
Swematic side-lever grease gun 606
Edwards, Sir Ronald, Electricity Council annual report 667
Edytect Switch automated limit switch 425
Effective writing for engineers-managers-scientists, by J. H. Tichy (book) 649
Effluent and Water Treatment Exhibition and Convention 84, 1036
Eggborough power station, coal supply for 415
Eggleston, W., on Canada's Nuclear Story (book) 691
Eigenvalue problems, variational methods for, by S. H. Gould (book) 469
Ejection system, underwater, in Gannet aircraft, Westlands 787
Elasticity, theory of, by M. Filonenko-Borodich (book) 607
Elasto-hydrodynamic lubrication, by D. Dowson and G. R. Higginson (book) 561
Elastomer sheet or film production process 205
Elbourne Memorial Lecture. *See* British Institute of Management
Eldo PAS communication satellite system 9
Eldorado. *See* Cadillac
Electrautom Ltd., ultrasonic stitchbonder for semiconductor manufacture 166
Electric Cable Makers Confederation, aluminium small wire cabling 293
Electric locomotive. *See* Locomotive
Electric motor. *See* Motor, electric
Electric power, distribution: 415 V–33 kV, by E. Openshaw Taylor and G. A. Boal (book) 817
research in, by P. Sporn (book) 775
systems, CIGRÉ conference on 16
see also Electrical power; Electricity; Power
Electric strength of polythene, ERA 228
Electricair ducted heaters, Creda range of (trade publication) 336
Electrical appliances, sales of 440
Electrical conduit of rolled-steel square section 648
Electrical conduit clip, Klip-lok 862
Electrical engineer(s), modern physics for, by E. J. M. Kendall (book) 909
Electrical engineering industry, exports 269
Electrical manufacturing industry, education and training requirements 141
Electrical power, and machines, advanced, by G. S. Brosan and J. T. Hayden (book) 649
generation control centre, France 57
system design, advanced studies in, by R. A. Hore (book) 36
see also Electric power: Electricity; Power
Electrical Research Association, aluminium electrical wires 293
electric strength of polythene 228
hybrid computer project 276
Electrical system, Concorde airliner 321
Electrical Trades Union, evidence to Royal Commission on Trade Unions 827
Electrical who's who 1966–67 (book) 83
Electrical work in shipbuilding, work study methods for 616
Electricians, notes for (book) 649
Electricité de France, La Rance power station 17
Electricity, for forge heating 771
see also Electric power; Electrical power; Power
Electricity Council, annual report 667
heating elements for hardening concrete 856
sales of electrical appliances 440
Electricity generating capacity, CEGB 235
Electricity supply industry, Italy, integration progress 144
position and prospects of 667
Scotland 1015
Electricity supply training board report 393
Electrochemical machining with sodium chlorate 804
Electro-deposition system, Dulux Electrocoat (trade publication) 470
Electrodialysis, in membrane separation processes 1113
Electrographic, photo-electric punched paper tape reader 208
Electro-heat, congress on (Brighton) 1036
Electroluminescence
basic theory of 41
dc, and crystal lamps 46
definition of 41
Engineering Outline 41
history of 41
Electroluminescent lamps, applications of 43
characteristics of 42
special applications 44
types and construction of 42
Electroluminescent material, zinc sulphide 42
Electroluminescent panels 42
Electrolytic capacitor. *See* Capacitor
Electrolytic grinding machines, Hammond 123
Electrolytic sewage treatment plant 621
Electromagnetic flowmeter, model 346, Brooks 462
Electromagnetic noise, elimination at low temperature 519
Electromagnetic pick-up, Airpax 991
Electromagnetodynamics of fluids, by W. F. Hughes and F. J. Young (book) 817
Electromanometer, Bell and Howell Ltd. 120
Electron(s), systems containing large number of (book) 775
Electron accelerator. *See* Accelerator
Electron microscope
advantages 819
applications 825
definition 819
depth of field 820
emission 825
Engineering Outline 819
resolving power 819
scanning 823
transmission 819, 820
limitations 822
types 819
X-ray microanalyzer 824
X-ray projection 824
Electron Microscopy, Advances in, conference on 130
Electron probe micro analysis, conference on 1078
Electronic Associates Ltd., hybrid computers 1064
1131 Variplotter plotting instrument 467
Electronic control of fuel injection system 582
Electronic Data Processing Committee, recommendation of font B (OCR-B) data print 968
Electronic engineers, education of, E. Williams 1085
Electronic impulse sender, Shipton 862
Electronic Machine Control, Proximitor Guard machine operator protection system 986
Electronic machine tool feed drive system 31
Electronic mine cables (trade publication) 608
Electronic pyrometer, Millivac 1138
Electronic voltmeter, trade publication 1146
Type TF2604, Marconi 463
Electronics, nuclear (book) 515
Electropainting. *See* Painting, electro
Electrophoretic painting. *See* Painting, electro
Electroplating of plastics 719, 1026
Electrosil Ltd., fluidics summing junction 376
glass-tin-oxide resistors 27
metal oxide film resistors 161
resistors (trade publication) 864
Electrostatic precipitator, hot-pass, Svenska Flaktfabriken 498
Electrotechnology, basic, by N. Jones (book) 993
dictionary of: German–English, by E. Höhn (book) 1035
introduction to, by S. J. Kowalski (book) 775
Electrothermal actuator, Smiths 72
Electrothermal Engineering Ltd., curing system for aircraft sealant 311
Electrovair 11 battery driven motor car 927
Electrovan fuel cell driven motor vehicle 927
Element(s) of linear circuits, by R. E. Scott (book) 381
Elementary particles, conference on 302
Elevating platform, Snorkel 366
Elevator, goods, Barron & Shepherd Ltd., 167
Elevator equipment, conveyor and (trade publication) 84
Elliott ARCH 9000 computer to control X-ray diffractometers 29
Elliott-Automation Ltd., ARCH 2000 digital computer 815
automatic mail sorting equipment 1065
automation plant for ISF (Imperial Smelting Furnace) process 815
Continental Hydraulics range of valves and cylinders 560
memory circuitry for Concorde airliner 715
small computers (trade publication) 952
traffic control systems 525
ultrasonic cleaning equipment 378
Elliott, B., and Co. Ltd., annual Christmas exhibition 1044
dual English/metric machine tool dial 989
Elliott Bros. (London) Ltd., vernistat ac potentiometers (trade publication) 1036
Elliott Electronic Tubes Ltd., high-voltage power supply units 605
microwave industrial heating ovens 168
Elliott/ISC constant-weight feeders 815
Ellis, John, & Sons Ltd., Ellis-Trief safety kerb 579
Ellis-Trief safety kerb 579
Ellison, George, Ltd., laminated busbar system 243
switchboard cubicles (trade publication) 1146
Elmo DM-16 projector 533
Elniva AB., bulk storage indicators 1071
Elonka, S. M., on Plant Operators' Manual (book) 213
ELSI. *See* Esso Lubrication Service to Industry
Emag-8 demagnetizing unit, Sonatest 207
EMB Co. Ltd., hot-chamber diecasting machine 1033
ultrasonic stichbonder for semiconductor manufacture 166
Embassy Machine and Tool Co. Ltd., Staehely milling machine for internal gears 681
Embossing machine, foil, Stilex Airfoil 858
Emerson, A. H., electrification of main line from Euston 793, 795
EMI Electronics Psychological Research Laboratory, control panel of EMIAC II analogue computor 715
EMIAC II analogue computer, control panel of 715
Employement. *See* Manpower; Labour; Unemployment
Employment charter for staff unions 435

Employment problems of automation and advanced technology: internal perspective, by J. Stieber (book) 83
Employment survey, Greater London Council 310
En steels, British Standard, mechanical and physical properties of, (Vol. 2) by J. Woolman and R. A. Mottram (book) 171
Enamel, porcelain, alkali resistance test 285
Encoder, telescope axis, Theta 1029
Encyclopedia, concise, of heat transfer, by S. S. Kutateladze and V. M. Borishanskii (book) 37
End mills, solid-carbide, Drill Service 606
ENEL, annual report 144
Energy for new towns, conference on (Harrogate) 395, 838
Engel, H. J. J., multi-storey buildings in Holland 679
Engelhard Industries Ltd., thermocouple wall chart (trade publication) 470
Engine(s)
aircraft. *See* Aircraft engine
diesel
Brons 942
Burmeister and Wain type 50-VBF-90 882
cardboard cut-out model, Stork Zwolle RHo 216k 9, 227
components research laboratory 148
development and experience, Götoverken 1054
Eagle, Rolls-Royce 102
Gardner 6LXB 505
Honda, in tractor 1053
industrial, Scania-Vabis 946
industrial (trade publication) 302
Lister 854
MAN 941
marine (trade publication) 302
medium-speed geared, for merchant ship propulsion 1007
repair shop at Swindon 832
Rolls-Royce type C4FLM 160
Ruston and Hornsby type 6ARM (trade publication) 1036
Scania Vabis 941
trade publication 994
type 84-VTBF18Ω, Burmeister and Wain 1011
Yanmar type LM65Y 643
industrial, order position and prospects 1086
output and order trends 437
motor car. *See* Motor-car engine
oil. *See* Engine, diesel
petrol, fuel-injection system for, AE 582
spark-ignition: fuel injection development, by C. H. Fisher (book) 381
Engineer(s)
anatomy of a profession, by J. E. Gerstl and S. P. Hutton (book) 951
and Civil Service 919
and economic and social progress, congress on, FEANI (Athens) 741, 776
and society, A. Wedgwood Benn 919. *Letter* 1006
Chartered, and technicians. *Letters* 746, 883
cinema film 916
effective writing for, by J. H. Tichy (book) 649
use of qualified, for R & D 964. *Letter* 1051
women. *See* Women
see also Civil, Electrical, Mechanical, etc.
Engineering
in Medicine and Biology, conference on 130
social history of, by W. H. G. Armytage (book) 171
see also Civil, Electrical, Mechanical, etc.
Engineering apprentice. *See* Apprentice
Engineering contract. *See* Contract
Engineering education. *See* Education
Engineering Employers Federation, employment charter for staff unions 435
Engineering equipment, historical, sale of 535
Engineering industry, export statistics 781
Engineering Industry Training Board, activities of 225
analysis of craft occupations by Perkins Engines Group 266
annual report 266
group training centre scheme 481, 962
Scotland 138
supervisory training 139
Training of Supervisors (booklet) 346
Engineering Materials and Design Exhibition and Conference 864
Engineering mechanics, by N. O. Myklestad (book) 691
Engineering Outlines
analogue computers 693
caviation 1037
cermets 429
cold extrusion 865
comment on. *Letter* 746
cryogenics 517. *Letter* 623.
differential transmission systems 651
electroluminescence 41
electron microscope 819
fast reactors 1147
fibre reinforced materials 995
fluidics 563
heat pumps 215
holography 1079
inertial navigation 85
magnetostriction 777
market research 259. *Letters* 314, 487
membrane separation processes 1113
Moiré fringes 911
particle accelerators 471
radioisotope instruments 383
range and direction finding 303
silicones 337
strain gauges 735
stroboscopes 131. *Letter* 746
surface finish 173
vacuum deposition 609
Engineering product(s), export statistics for 222
Engineering productivity, (Vol. 2), by W. F. Walker (book) 83
Engineering project competition for secondary schools 916
Engineering Sciences Data Unit 171
Engineering thermodynamics, by D. B. Spalding and E. H. Cole (book) 1111
Engineer's Day, exhibition at Science Museum 96, 916. *Letter* 969
Engineers' Guild, activities and recruitment campaign 393
evidence to Fulton Committee 960
meeting with Federation of European National Associations of Engineers 741
Engins Matra, Martel air-to-ground missile 54
English Channel, high-voltage dc power transmission scheme 548
English Electric Co. Ltd.
Danish State Railways electrical equipment 662
dc power transmission line to Sardinia 1094
electric locomotives for Pakistan 56
engineering project competition for secondary schools 916
exhibition of reinforced plastics 968
high-voltage dc power transmission projects 546
Immingham refinery 278
joint development of LVA24 diesel engines 435
Kingsnorth–Willesden dc transmission line 546, 583, 1098
protective relays application guide (book) 171
railway electrification in Pakistan 56
reinforced plastic for roof mouldings 967
shutter heater panels 397
switchgear (trade publication) 608
thyristor control for multiple-unit train set 796
transformer for Abathaw B power station 231
turbine automatic control equipment systems 534
turbine blades, analysing vibrations of 1065
English Electric Domestic Appliance Co., Liberator-4027 automatic washing machine 201
quality and reliability activities 836
English-Electric-Leo-Marconi Computers Ltd., KDF 9 computer used on Five Ways Underpass 508
motor vehicle route planning by computer 788
paper tape equipment 685
systems 4-70 computers for GPO Giro money-transfer system 234
Termi-point wiring machine 723
English Electric Valve Co. Ltd., Argon ion lasers 769
exports to US 828
English land measuring to 1800: instruments and practices, by A. W. Richeson (book) 993
English Numbering Machines Ltd., print-out counter (trade publication) 818
English Steel Tool Corp., Cyclone 70 tool steel 289
Enlarger, inspection, Hilger 251
Ennos, A. E., holography 1082
Enots Ltd., fluidic control systems 528
fluidics (trade publication) 776
rotary feed table 907
Enrico Fermi fast reactor 1150
Entreprise Fougerolle, La Rance power station 19
Environmental monitoring in emergency situations (book) 515
Envoy Architect fan convectors (trade publication) 692
Epocel after-filter, desiccant drier filters 333
'Epoch' plastic piping system (trade publication) 38
Epoxy bonder, Tercol (trade publication) 952
Epoxy encapsulated transistor, Mullard 463
Epoxy moulding for radome of Concorde supersonic airliner 897
Epoxy primer (trade publication) 818
Epoxy resin coatings, HPS 1025
Epsylon Industries Ltd., differential dc amplifier 553
magnetic tape recorder 289
Equipment design, human body in, by A. Damon, H. W. Stoudt and R. A. McFarland (book) 427
Erasing unit, white-line, Mighty Mite, for road surfaces 602
Ergonomic study, man and motor cars, by S. Black (book) 775
Ericsson Telephones, Ambergate electronic telephone exchange 1056
Erie Resistor Ltd., solid carbon resistors 250
Errut Products Ltd., asphalt cutting machine 605
Edco grinding machine for concrete, stone or steel 212
Esso Chemical Co. Ltd., butyl-lined silos 1053
butyl rubber bag for grain 247
Esso Lubrication Service to Industry 634
Esso Petroleum Co., portable trailer-mounted fire-fighting water monitor 980
Establissements Neyrpic SA, bulb turbines 18
Estuary, Humber, tidal model of 275
Rance, tidal power station 17
Estuary barrage and water supply problem 281
ET 316 anti-aircraft missile, British Aircraft Corp. 492
ET 316 low-level anti-aircraft weapon system 188
Eta meson, decay phenomena 75
Etchells, W. K., forge furnaces 771
Ether Engineering Ltd., binary-decimal converter 730
voltage transducers 604
Ether Ltd., laboratory furnace temperature controller 1073
power supplies and voltage regulators (trade publication) 382
Ethylene dichloride, polyvinyl chloride production from 62
production plant 60, 61, 62
ETS (Lonertia) Ltd., Schmidt shaft coupling 1071
Eubanks automatic wire stripper (trade publication) 1078
Euco Tools Ltd., tilting and dividing rotary table 687
Euler loads, determination of, J. M. Townson 206. *Correction* 286. *Letters* 707, 883, 969
Eureka drilling rig 589
Eureka fresh water generator 157
Eureka Mekaniske Verksted A/S Eureka fresh water generator 157
Europa, Lotus, motor car 1089
Europa dictating machine 684
European Machine Tool Exhibition (Hanover) 1078
European Nuclear Energy Agency, symposium on 84
European Organization for Nuclear Research, activities 818
European Space Research Launcher Development Organization, costs and future of 308
payload for astronomical satellite 314
European technological community, proposals for 1119
Europort '66 Exhibition and Congress (Amsterdam) 875
exhibits at 940
Eurotherm Ltd., temperature controllers (trade publication) 818
Euston main line electrification conference 783, 793
Eutectics in fibre reinforced materials 997
Evans, I., on Strength, Fracture and Workability of Coal (book) 775
Evans, V., on Plastics as Corrosion-Resistant Materials (book) 1111
Evaporation control, reservoir water 326
Evaporator cutting and stitching for SS *Chusan* 169
Everite asbestos cement pressure pipe 856
Evers & Wall Ltd., heavy duty pumps 290

Evolution, simulated, artificial intelligence through, by L. J. Fogel, A. J. Owens and M. J. Walsh (book) 909
Examples in engineering thermodynamics, by O. G. Boxer (book) 83
Excavator(s), crawler, Bamford 126
hydraulic 946
Hy-Mac 580 556
Priestman 638
Thomas Smith & Sons 637
Excavator demonstration, Ruston-Bucyrus 637
Excavator-loaders, Ford 902
13 Six Offset, Ford 902
16 Six, Ford 902
Wain-Roy-300 900
Excavator transport, two-wheeled trailer, Hamilton 379
Exhaust emission, carburettor, control systems 660
Exhaust pollution control systems, motor car, Lucas 706
Exhibition(s)
British engineering week (Prague) 256
British Industrial (Moscow) 95
Business Efficiency, copying machines 595
exhibits at 684
Commercial Motor Show, exhibits at 580
construction equipment demonstration (Hurn) 637
Dairy Engineering 302
DRUPA International Fair, printing and paper (Dusseldorf) 1078
Effluent and Water Treatment 84, 1036
Engineering Materials and Design 864
Engineer's Day 96, 916. *Letter* 969
European Machine Tool (Hanover) 1078
Europort '66 (Amsterdam) 875
exhibits at 940
Export Services (Olympia) 700
Farnborough Show, aircraft engine exhibits 491
components and equipment exhibits 403
exhibits at 443
missile exhibits 492
Fighting Vehicle Research and Development Establishment 620
Fluid Power International (Olympia), exhibits at 557
Food Machinery 302
grinding machines, Alfred Herbert Ltd. 123
Industrial Training (Manchester) 650
instrument, CoID 715
International Caravan (London) 971
International Chemical (Milan) 705
International Clean Air (London) 571, 660
International Clothing Machinery and Suppliers (Sydney) 562
International Commercial Vehicle, exhibits at 505
International Cycle and Motor Cycle Show (Earls Court), exhibits at 923
International Nuclear Industries Fair (Basle) 440
International Road and Traffic Networks Engineering (Imperial College) 578
International Welding (1967) 38
INTHERM 67 (Stuttgart) 470
London International Engineering and Marine (1967) 38
machine tool, B. Elliott & Co. Ltd. 1044
Mesucora 67, on measurement and automation 38
Motor Show (Earls Court) exhibits at 712, 752
Motor Show test day (Goodwood) 801
NAVIGARE International Maritime (Helsinki) 952
Paris Automobile Salon, exhibits at 663
Public Works and Municipal Services (Olympia), exhibits at 853, 946
Radio Show (Earls Court), exhibits at 395
Reinforced Plastics (Earls Court) 922
English Electric 968
Royal Show, agricultural machinery exhibits 146
Royal Smithfield Show (Earls Court), exhibits at 1052
Schoolboys and Girls 1036
Science, Medicine and Technology, Westminster Abbey 229
Ships' Gear International '66 (London), exhibits at 157. *Corrections* 375, 511
surface treatment of metals 130
Sussex-Normandy trade fair (Brighton) 570
traffic engineering (London) 525
Turin Motor Show, exhibits at 840, 886
Exhibition ship, *Santhia* 529
Exmouth frigate, gas turbine propulsion 760
EXO skeletons in fire brigade work 366
Expandite Ltd., epoxy primer (trade publication) 818
expansion bolts (trade publication) 382
Expansion bolts (trade publication) 382
Expansion machine, Clarke engine 370
Experiments in production technology for English students, by R. Winrow (book) 1145
Exploding wire, light from, NBS 75
Explosives, high, and propellants, by S. Fordham (book) 817
Export(s), electrical engineering industry 269
Export containers, air freight 788
Export information, BSI 691
Export Salesman Ship Ltd., floating exhibition ship *Santhia* 529
Export Services Exhibition (Olympia) 700
Export statistics, engineering industry 781
for engineering products 222
Russia 95
Export traffic distribution, survey on 142
Express Dairy (Northern) Ltd., high speed loading of milk bottles 441
Extraction towers for pulp and paper mill 496
Extractive metallurgy, symposium on 130
Extrusion
backward 865
cermets 431
cold
advantages and limitations 868
billet geometry 868
billet production and lubrication 870
definition, 865
economics of 868
Engineering Outline 865
future trends 871
methods and shapes 865
multi-stage transfer presses 870
press loads and tool stresses 867
product properties 870
punches, heat treatment of, PERA 682
suitable steels 867
tool design 868
tooling assemblies and presses 870
definition 865
fluid, development of, ASEA 766
forward 865
Hooker process of 866
hydrostatic 871
pvc, for busbar insulation, Marshall 604
Extrusion plant for final drive shafts, Ford 29
Extrusion press. *See* Press
Extrusion ratio 865
effect of 868

F

F1G2700 float-operated marine tank level gauge 208
F-104 fighter aircraft, grounding of Federal German version 1047
Facsimile communications system, Mufax Courier 500 684
Factory accidents, report on 525
Fagersta Bruks AB, stainless steel tube for dissimilar liquids 551
Fagersta Steels Ltd., stainless steel tube for dissimilar liquids 551
Fair, G. M., on Water and Wastewater Engineering, Vol. 1 (book) 691
Fair, trade. *See* Exhibition
Fairey Co. Ltd., hydraulic power packs 557
Fairey Engineering Ltd., Fairstat static switching systems 1140
Fairfield Shipbuilding & Engineering Co., Wye Viaduct 499
Fairhurst, W. A. and Partners, Tay road bridge 312
Fairmile-Lilleshall Ltd., Lilleshall-Schiess-Defries electric and hand winches 1033
Fairstat static switching systems 1140
Fan(s)
and blowers (trade publication) 650
and ventilators (trade publication) 172
axial-flow, Aerex 900
Brooks extractor, for painting shop 296
centrifugal, Turbocent range 290
double-inlet, Smiths Industries 639
industrial (trade publication) 302
Turbro Twin 511
Fan blades, Torrington 553
Fan convectors, hot water (trade publication) 692
Fararc IV Mark 2 portable arc welding equipment 602
Farm, automated feed production plant for 577
Farm Planning and Computer Services 10
Farming. *See* Agriculture; Irrigation; Tractor
Farming, National Power, Conference (Harrogate) 650
Farnborough Air Show, aircraft engine exhibits 491
components and equipment exhibits 403
exhibits at 443
missile exhibits 492
Farradane, J., Information Scientists' conference 140
Fast reactor. *See* Nuclear reactor(s)
Fastener Engineers Inc., Power-Draw wire-drawing machines 514
Fatigue stress in girder decks, Goodearll 678
Fattorini & Sons Ltd., nameplates and badges (trade publication) 562
Fawley Foundation Lecture, P. M. S. Blackett 964. *Letter* 1051
Fawley power station 239
Faxitron 804 X-ray inspection system 988
FEANI. *See* Federation of European National Associations of Engineers
Federal German Air Force, grounding of Starfighter aircraft 1047
Federation of Civil Engineering Contractors, civil engineering films (cinema) and models (trade publication) 1036
Federation of European National Associations of Engineers, congress on engineer and economic social progress (Athens) 741, 776
meeting with CEI and Engineers Guild 741
Federation of Manufacturers of Construction Equipment, demonstration of plant 637
Federazione delle Associanzioni Scientifiche e Techniche (FAST), International Chemical Exhibition-Symposium (Milan) 705
Feed(s), press (trade publication) 84
strip, for presses, Festo-Pneumatic 464
Feed production plant, automated, for farm 577
Feedback Ltd., Primer Logikit for teaching numerical control techniques 459
Feeder(s), bin activators and, for difficult materials, Vibra Screw 939
constant-weight, Elliott/ISC 815
hopper, pneumatic, Vac-U-Max 514
Feeding magazines, automatic bar (trade publication) 336
Feedthrough, collar, vacuum, and microcircuit jig, Genevac 730
linear and rotary motion, Vacuum Generators 425
FeightMaster, cushioned coupling device for railway wagons 1024
Feilden, G. B. R., Feilden Report 185
Feilden Report on engineering design, implementation progress 185
Fenner, J. H. & Co. Ltd., drive belts (trade publication) 994
V-belts (trade publication) 172
Fenton, K., on Thermal Efficiency and Power Production (book) 171
Ferguson four-wheel drive FF motor car 802
Ferguson, Harry, Research Ltd., activities of 412
Ferguson R5 prototype motor car 412
Ferguson-Teramala torque converter 412
Fernox Crystal corrosion inhibitor 248
Ferranti Ltd.
Argus digital computer input/output equipment 1141
automatic drawing machine study 227
computer driven cathode ray tube displays 372
edge connectors for printed circuit boards 604
precision potentiometers 1072
Ferrari, motor cars at Turin Motor Show 886
Ferraris Development & Engineering Co. Ltd., roller ratchet drive for synchronous motors 462
Ferrodor micaceous iron paint 456
Ferrous alloys, technology and properties of, for high-temperature use, by M. G. Gemmill (book) 301
Ferry
car, *Princess Victoria*, sinking of 484
Skagerak, sinking of 484
cross-Channel car, *Dragon* 396
Leopard 396
Gosport Queen, Schottel propulsion 283
Portsmouth Queen, Schottel propulsion 283
Ferrybridge C power station 237, 238
coal supply for 415
cooling tower failure 351

report of inquiry 399
Festo-Pneumatic strip feed for presses 464
FF motor car, Jensen 666
Fiat, Dino Spider motor car 841
exhibits at Commercial Motor Show 580
motor car crash testing techniques 315
motor car factory for Russia 275
Fiat 124 Sports Spider motor car 840, 886
Fibre(s), production and properties 996
Fibre data summaries, by J. E. Ford (book) 863
Fibre drum package for wire spools 70
Fibre optics for lighting in motor cars 620
Fibre reinforced materials 432
basic physics of 995
controlled eutectics 997
definition of 995
Engineering Outlines 995
future trends 998
Fichtel and Sachs two-speed hub in Moulton bicycle 14
Fi-Cord International, transistorized dictating machine 212
Field Emission Corp., Faxitron 804 X-ray inspection system 988
Field & Grant Ltd., Labelarm alarm annunciator system 289
Field Pneumatics Ltd., Meiji Model MC spray gun 1033
Fife, joint industrial coordination committee 3
Fighting Vehicle Research and Development Establishment, exhibition of 620
Filler wire, aluminium (trade publication) 562
Film(s)
ciné, Minette S4 editor for 833
cinema, and models, civil engineering (trade publication) 1036
'The Engineers' 916
numerical control of machine tools 918
contact positive, Cronaflex 249
on automation, Ministry of Technology 529
polyester, Melinex 1064
Terphane 1030
polypropylene laminated, cartons using, adhesive for 1138
Film loop instruction courses 662
Film processing method, Kodak Bimat 1131
Film storage library for parts records, Telematic Rapid System, Westinghouse 205
Filonenko-Borodich, M., on Theory of Elasticity (book) 607
Filter
air, Activ-V activated carbon 166
Airvent 1028
fabric, Midland Heating 809
all-plastic unit 207
desiccant drier, Epocel after-filter 333
Pall 333
Reverse Ultipor pre-filter 333
diesel (trade publication) 994
expander, laser beam, Lyons 1030
magnetostriction in 777
oil, portable pack 125
trade publication 214
rotary vacuum, stainless steel 167
trade publication 608
Filtering catalysts, ICI 551
Filtrap 120 filter (trade publication) 994
Fine-pet marker 27
Finishes, building (trade publication) 172
Finishing machines (trade publication) 336
Finland, motor-car industry 784
nuclear power station for 875
trade with 394
Finlayson, I. R., undersea cable system 355
Finney, D. J., member of Computer Board for Universities and Research Councils 348
Finnflow pneumatic-hydraulic-mechanical cargo-handling system 1102
Finnhansa roll-on/roll-off ship 1102
Finnlines Ltd., *Finnhansa* and *Finnpartner* roll-on/roll-off ships 1102
Finnpartner roll-on/roll-off ship 1102
Fir plywood (trade publication) 692
Fire(s), diesel locomotives 1099
diesel multiple-unit trains 970
Fire/crash tender, Nubian Major 506
Fire extinguishers (trade publication) 562
Fire fighting, communications in 365
hundred years of 361
Fire fighting appliances, development of 361
Fire fighting equipment, and techniques, development of 361
in cargo ships 1013, 1014
Fire-fighting water monitor, portable trailer-mounted 980
Fire prevention techniques, development of 361
Fire-proof plastics 163
Fire protection of steel 599
Fire rating, A. C. Clarke 680
Fire regulations on multi-storey buildings, G. B. Colbridge 677
Fire resistance of doors 457
Firebird gas-turbine motor cars 929
Firestone, Nomex nylon overalls for racing motorists' protection 274
Firman, Henry J. Ltd., Grafham Water reservoir 154
Firth Brown Ltd., steelmaking (trade publication) 130
Firth-Vickers, Staybrite stainless steel for bodies of commercial motor vehicles 1049
Fischer & Porter Ltd.
differential pressure measurement 417
Magnarator variable area flowmeter 27
magnetic flowmeter 376
model 10A1190 flowmeter 1107
Scanline indicating controller 71
Fisher, B. H., real loading on structures 676
Fisher, C. H. on Spark-ignition Engines: Fuel Injection Development (book) 381
Fisher Governor Co. Ltd., air operated valves (trade publication) 864
Fisher-Humphries, tractor-mounted hedgecutter 146
Fisher, James & Sons Ltd., *Aberthaw Fisher* shallow-draught vessel for generating plant 231
Fisher & Ludlow Ltd., Bendix LT and LA automatic washing machines 198
Fishing, technical developments in 834
Fishing vessels, and their machinery, R. Bennett 834
propeller shaft power measurement in 639
Fisons Farmwork Ltd., weed control service 1022
Fisons Horticulture Ltd., Weedex weed killer 1020–1022
Fisons Pest Control Ltd., weed control on railway tracks 1020–1022
weed control application and costs 1020–1022
Fittings, compression, Simplifix 560
tube (trade publication) 818
FitzGerald, models in steel making 807
Five Ways Underpass, Birmingham 508
Fix-Box containers 900
Fix Equipment Ltd., Fix-Box containers 900
Flame(s) in Industry, symposium on 130, 806
Flame-retardant polyester resins 1062
Flame trap for gas lines, Thorn Parsons 1139
Flash 22 multi-turn precision dials 463
Flashing beacon, Comet 1110
Flaw detector, ultrasonic 379
Flexane flexible polyurethane for short-run mouldings 1134
Flexible Ducting Ltd., vacuum hose making machine 601
Flexible Tubing Corp., vaccum hose making machine 601
Flexibox Ltd., Chemiflex mechanical seal 292
Flexowriter automatic writing machines 685
Flight, bird, study of, Loughborough 1046
Flight control system, Concorde airliner 321
Flight control system equipment, Smiths 405
Flight Refuelling Ltd., decade counter circuit board 27
Hamlin DRG2 relay coils 71
Stoptex dropper switch textile thread breakage detector 1139
Flint, A. R., tall buildings 679
Flintham, E., on Manual, Semi-Automatic and Automatic Arc Welding (book) 993
Float glass, Pilkington 418
Floating exhibition ship, *Santhia* 529
Floating hotel and office block, Amsterdam 920–921
Floating landing mats, aluminium panels for 9
Floating tank roofs (trade publication) 910
Flood prevention in Netherlands, Delta Plan for 110
Floodlight
gas, LP Gas Wise 420
LP Mini-Flood 420
LP Site light 420
mobile, Mark II Trailalite 687
portable, Allam 809
Florin Ltd., mitral valves 745
Florina Delineants Ltd., Florina safety cordon 579
Flow, nonstationary, of compressible media, by R. Sauer (book) 1035
Flow-Base system self-emptying silos 250
Flow rate indicator (trade publication) 428
Flowers, B. H., chairman of Computer Board for Universities and Research Councils 348
Flowmeter, electromagnetic, model 346, Brooks 462
magnarator variable area flowmeter 27
magnetic 376
model 10A1190, Fischer and Porter 1107
Fluid(s), electromagnetodynamics of, by W. F. Hughes and F. J. Young (book) 817
Fluid-bed drying plant for coal, Heyl 808
Fluid control systems (trade publication) 172
Fluid dynamics, by J. W. Daily and D. R. F. Harleman (book) 83
Fluid Logic, and Amplification Conference (Cambridge) 470
in garment production 833
Fluid mechanics, by D. A. Gilbrech (book) 1035
Fluid mixer, Kestner 78
Fluid Power International Exhibition (Olympia) exhibits at 557
Fluid switch, principle of 287
Fluidic control systems 528. *Letter* 707
Fluidic devices, reduction in manufacturing costs 1065
Fluidic summing junction 376
Fluidics
aeronautical applications 566
applications 565
beam or jet deflection amplifiers 564
Coanda effect in 563
definition 563
Engineering Outline 563
jet impingement elements 564
machine tool control by 566
medical applications 566
missile applications 566
moving part devices 565
performance factors 563
speed control by 566
trade publication 776
turbulence amplifiers 564
vortex amplifiers 565
wall-attachment devices 563
Fluidization research, SRC grant 204
Fluidized beds, for freeze drying of foodstuffs 852
hydrodynamics and heat transfer in, by S. S. Zabrodsky (book) 1077
Fluor (England) Ltd., acetylene production plant, Barry, S. Wales 60
Maydown, Northern Ireland 60
ethylene dichloride (EDC) production plant 60, 61, 62
Fluorescent lamp, battery powered, Bardic 126
Fluorescent lighting. *See* Lighting
Flute milling machine, Flutomatic 1025
Flutomatic flute milling machine 1025
Fluvial hydraulics, introduction to, by S. Leliavsky (book) 733
Flygt, submersible pump 212
Flying Star I motor car, Touring Superleggera 888
Foam insulation, rigid urethane, Daltolac 60 and Suprasec DN 370
thermographic examination of 128
Foam plastic. *See* Plastic
Foam products (trade publication) 214
FOB threading machines 601
Fogel, L. J., on Artificial Intelligence through Simulated Evolution (book) 909
Fogg & Young Engineering Ltd., laboratory extrusion presses 767
Foil embossing machine, Stilex Airfoil 858
Food and Agriculture Organization. *See* United Nations
Food and drink machinery, output and order trends 438
Food and drink machinery industry, position and prospects 1086
Food freezing, application of cryogenics 520
Food irradiation, Karlsruhe international conference on 28
Food Machinery Exhibition 302
Food shortage, World, report on 740
Foodstuffs, fluidized beds for freeze drying of 852
Footwear, Desma 609 moulding machine for 356
Ford of Britain, Ford D series truck range 505
Ford Transit medium van range 505
formula 2 motor car engine 575
Ford, D. E., Medical Rehabilitation Centre 658
Ford electric motor car 660
Ford Farm Accounting Computer Service 10

Ford, H., committee on tribology 630
Ford, J. E., on Fibre Data Summaries (book) 863
Ford Motor Co. Ltd.
automatic hobbing machines for starter-ring teeth 81
battery driven motor car 706
battery operated mail delivery vehicle 229
Cartic wagon for motor car rail delivery 144
Cortina motor car modifications 710
D series truck range 505
excavator-loaders 902
exhibits at Motor Show 752
extrusion plant for final drive shafts 29
Laurence Pomeroy scholarship 10
Mk. 4 estate motor car 752
remote control system for tractors 1065
Sprite Transit motor caravan 621
Transit medium van range 505
Wheelabrator blast cleaning machine 29
Ford Tractor Operations, excavator-loaders 902
Fordham, S., on High Explosives and Propellants (book) 817
Fords (Finsbury) Ltd., inspection machine for glass bottles 244. *Letter* 487
Forestal Industries (UK) Ltd., M and T 323 nickel plating process 718
Forging
cold, high-pressure techniques, ASEA 765
processes 866
fuels for, symposium on 771
heating for, symposium on 771
trade publication 130
tubular (trade publication) 734
Forging furnaces, developments in 771
Forging manufacture, conference on 336
Fork-lift truck(s)
cross-country 904
Lidder 1142
Matbro M40, commercial applications 904
military uses 904
separable for easy transportation 904
Powerstor storage and handling system for use with, A. G. Wild 464
trade publication 84, 1078
Forming, high-pressure techniques, ASEA 765
Formula 2 motor car engine, Ford of Britain 575
Formulabs Industrial Ltd., colour coding machine for pvc-insulated wire 124
Fort William pulp and paper mills. *See* Wiggins Teape
Fortune in the North Sea, by P. Hinde (book) 301
Foster Transformers, substation enclosure 56
Foundation Engineering Ltd., Grafham Water reservoir 154
Foundry. *See* Casting; Moulding, etc.
Foundry industry, training programmes 570
training recommendations of joint committee 1002
Foundry Suppliers Ltd., King Model 66 Brinell hardness testing equipment 422
Teha honing and boring machines 514
4D Engineering Ltd., extra-wide latex sheet 326
Fourway Silver-Rung adjustable ladder 468
Fowler, M. J., on Guide to Scientific Periodicals (book) 1145
Fox, Samuel, & Co. Ltd., austenitic stainless steel (trade publication) 336
Foxboro Yoxall Ltd., bitumen refinery Eastham 683
moisture measuring head for small coal 1025
Fractionator, Vallvik, for pulping process 496
Fracture toughness parameters to structural metals, application of, by H. D. Greenberg (book) 733
Fram Filters Ltd., filters (trade publication) 608
Fram Precast Concrete Ltd., Portsmouth Evening News building 972
Frame, Building, National, for precast concrete structural systems 232
France
development of technical education in: 1500–1850, by F. B. Artz (book) 1111
electrical power generation control centre 57
La Rance tidal power station 17
motor industry, position and prospects of 663
super-tanker committee 398
Frankel Structural Steel Ltd., Toronto-Dominion Bank Tower 844
Fransson and Brantemo AB, FOB threading machines 601
Franzini, P., decay of eta meson 75
Frazer, Alan, racing Imp motor car 801
Freeman, Fox & Partners, Aberthaw B power station 368
Severn Suspension Bridge 456
Wye Viaduct 499
Freeman, R., early Severn Bridge scheme 450
presidential address, ICE 785, 786
Freemantle, R. R., system building 680
Freeze drying of foodstuffs, fluidized beds for 852
Freeze drying research equipment, Stokes 551
Freezing, food, application of cryogenics 520
Freight, air, export containers 788
balancing, in aircraft 600
transport, White Paper on government policy 226
Freight bogies (trade publication) 38
Freight container, general purpose, Duramin 31, 299
French, W. & Co. Ltd., Grafham Water reservoir 154
Frequency generating and control for radio systems, conference on 1078
Frequency measuring equipment, digital counter, Venner 403
Frequency meters for monitoring power supplies, Dawe 292
Fresh water generator, Eureka 157
Freudenthal, A. M., on Introduction to the Mechanics of Solids (book) 1035
Frevert, R. K., on Soil and Water Conservation Engineering (book) 515
Friction, and cutting, metal transfer and build up in, by V. D. Kuznetsov (book) 255
lubricant, power losses due to 632
Friden Ltd., Computyper electronic invoicing machine 985
Flexowriter automatic writing machines 685
Frigate, *Exmouth*, gas turbine propulsion 760
Fry, Alan, Controls Ltd., Arc Rule arc-drawing rule 421
Fry, J., Sea Truck motor boat 189
Fry, M. J., automated diode assembly 899
Fuchs, E., British Standard for pressure vessels 272
Fuel(s), for forging, symposium on 771
natural gas as, for gas turbines 704
solid, appliances (trade publication) 910
weightless, aluminium tube for force feeding 1023
see also under specific types of fuel
Fuel cells, in locomotives 797
International study symposium on (Brussels) 1146
Fuel economy 1966 (book) 469
Fuel injection conversion for motor cycles 923
Fuel injection development, spark-ignition engines, by C. H. Fisher (book) 381
Fuel injection system, Bosch 538
for petrol engines, AE 582
Kugelfischer 538
Lucas Mark II 538
Mercedes-Benz 538
Tecalemit-Jackson 538
Fuel oil for forge heating 771
Fuel pump. *See* Pump
Fuel system, Concorde airliner 321
Fukuyama iron and steel works 189, 488
Fulmer Research Institute Ltd., activities of 622
Fulton Committee, Engineers' Guild evidence to 960
on Civil Service 960, 1120
Fulton, Lord, on engineer and society 919
Fulton range of steam boilers 80
Function generators 695
Fundamentals
of corrosion, by J. C. Scully (book) 129
of digital machine computing, by G. Hintze (book) 863
of display systems, by H. H. Poole (book) 335
of motor vehicle technology, by V. A. W. Hillier and F. W. Pittuck (book) 37
Furnace(s)
annealing, Fukuyama steelworks 490
boiler, sulphates in 1064
corrosion in, ASME meeting 1064
for refuse incinerator 751
forging, developments in 771
Gaserator, for refuse incinerator 751
glass-melting, platinum equipment for 325
heating, AEI 601
laboratory, temperature controller 1073
reheating, control system for 325
vacuum, VIA-VAC F.A.(B)N.C. 33
walking-beam, fuel-fired, Ungsbolaget 859
Furnace air-blast heater, Imperial Smelting 299
Furnace performance, model tests on 806
Furniture, office (trade publication) 470
Fuse carriers, Memstar 70
Fuse switch, Hi-Break 1140

G

Gabor, D., holography 1079
holography for engineering measurements 74
Gainmaster booster for battery driven vehicles 930
Galbestos coated steel formed roof covering (trade publication) 1036
Gale, W. K. V., on Black Country Iron Industry (book) 213
Gallagher, E. P., steelwork fabrication and protection 679
Gallwey, Sir John (Automation), Ltd., Protimeter controller for grain drying plant 1052
Galvanized steel sheet, Galvatite 846
Galvanizing line, hot-dip strip Sendzimir 848
Galvatite galvanized steel sheet 846
Gamma rays in radioisotope instruments 384
Gannet aircraft, underwater ejection system in, Westlands 787
Gantry(ies), mobile, Tollbridge 253
Garage extension over Grand Union Canal 835
Gardiner and Theobald, road construction cost trends study 7
Gardner Engines (Sales) Ltd., type 6LXB diesel engine 505
Gardner, F. M., on Phaselock Techniques (book) 863
Gardner, J., & Co. Ltd., ventilation of Birmingham New Street station 880–881
Garment production, fluid logic in 833
Garreau, M., Euston main line electrification 795
Gas(es)
liquefied, bulk storage and transport of 517
physical properties of 518
natural. *See* Natural gas
nonlinear pressure waves in, by R. Sauer (book) 1035
town. *See* Town gas
underwater reserves, M. E. Spaght 584–593
see also under specific types of gas
Gas/air torch, Production Sales 467
Gas appliance(s), conversion for natural gas 714
governor for, Parkinson Cowan 73
Gas boosters, oil-free, Haskel 559
Gas cleaning, industrial, by W. Strauss (book) 561
Gas cock, interlocking, Rudge 947
Gas composition by ionization 389
Gas control (trade publication) 650
Gas Council, annual report 714
conversion of gas appliances executive 958
drilling rig *Orion* 3, 1088
Gas cylinders, contaminated, BOC 485, 576
Gas discoveries in North Sea 1088
Arpet 706
commercial exploitation 714
Gas drilling, offshore procedure 584–593
Gas exploration, offshore procedures 584–593
Gas floodlight, LP Gas Wise 420
Mini-Flood 420
Sitelight 420
Gas-gun, hypervelocity, for re-entry research 508
Gas industry today and tomorrow, by L. T. Minchin (book) 775
Gas industry training board report 393
Gas ionization devices 386
Gas laser. *See* Laser
Gas lines, flame trap for, Thorn Parsons 1139
Gas main, underwater pipeline to Isle of Wight 155
Gas piping, plastics, Chempact 947
Gas sampling components, Servomex 1028
Gas scrubber, Ambuco 688
Gas service governor (trade publication) 428
Gas supplies, position and prospects 744–745
shortages, extent and causes of 660
Gas Wise LP gas floodlight 420
Gascoyne, P. ff., traffic lights 7
Gaserator furnace for refuse incinerator 751
Gaskell and Chambers, push-button beer meter 284
Gast oil-free vacuum pump 25
Gater, A. G. R., British tools for developing countries 1006
Gateshead, two-level roadway scheme 311
Gauge(s)
backscatter 385
bulk density measurement by 388
thickness measurement by 387
level, float-operated marine tank, F1G2700 208
neutron moisture 385

output and order trends 437
transmission 385
for weight or thickness measurement 387
Gauge materials, dimensional stability in 246
Gauging, air, for grinding of ball bearings 326
Gay, P. J., paint based on linseed oil 679
Gazey, B. K., on Applied Underwater Acoustics (book) 381
Gear(s), internal, milling machine for, Staehely 681
tipping, hydraulic, Edbro 505
Gear research, at Cambridge University 179
Gear strength determination, compression block testing for, Tool Steel Gear 461
Gear testing instrument, Goulder Mikron 466
Gear units for electrostatic precipitators, Varatio 374
Gearbox, automatic, type 35, Borg-Warner 625
5 forward speed, Leyland 507
15-speed precision spur 1140
trade publication 650
GEC Computers & Automation Ltd., S-TWO digital computer 1032
GEC (Electronics) Ltd.
Courier pocket-sized radio telephones 405
Sky 505 vhf air/ground aircraft transceiver 405
telecommand receiver 405
transistorized television camera 533
transistorized vidicon camera 405
UK 3 experimental satellite 405
GEC Engineering Group, automatic static switching equipment for tinplate classifying line 170
static network stabilizer 764
G.E.C. (Process Engineering) Ltd., crusher demonstration unit 854
GEC Road Signals, traffic control systems 525
GEC (Telecommunications) Ltd., microwave communications system, Australia 313
testing station for microwave aerials 169
Geels, B. H., on Handbook of Relay Switching Techniques (book) 607
Geiger-Muller counters 384
Gemini-10 spacecraft, results of 187
Gemini-11 achievements 535
Gemini-11 experiment, photographic emulsions used in, Ilford 600
Gemini-12 space flight, accomplishments 920
Gemmill, M. G. on Technology and Properties of Ferrous Alloys for High-temperature Use (book) 301
General Descaling Co. Ltd., chemical cleaning plant for paint-mixing vessels 466
Spray-O-Mat rotating head for vessel internal cleaning 813
water main coating (trade publication) 734
General Dynamics, desalination plant 550
General Electric Co. Ltd.
automatic positional control for plate rolling mill 640
Grafham Water reservoir 154
heavy-duty industrial gas-turbines 656
induction motors (trade publication) 818
infra-red heating unit 987
lifting magnet 329
traffic light control by proximity detector 276
UK-3 satellite 1008
General Electric Co. (US).
high-voltage dc power transmission projects 546
Hytafill can contents checking equipment 509
semiconducting diamond for thermistor 1104
thermistor with diamond element 205
Yttralox transparent ceramic 805
General Motors Corp.
Cadillac Eldorado front-wheel drive motor car 575
DOWB two-man submersible undersea vehicle 314
Dur-Ni nickel strike coating for bumpers 1123
electrically powered motor vehicles 927. *Letter* 1006
electrochemical machining with sodium chlorate 804
Electrovair 11 battery driven motor car 927
Electrovan fuel cell driven motor vehicle 927
exhibits at Paris Automobile Salon 664
fibre optics for lighting in motor cars 620
Firebird gas-turbine motor cars 929
hypervelocity gas-gun for re-entry research 508
magnetic perturbation scanning materials testing method 509
Pontiac GTO motor car 12
survey of new models from US UK and Germany 541
Turbo-Cruiser gas-turbine bus 929
Turbo-Titan III motor truck 929
General Post Office
automatic mail sorting equipment 1065
dry-reed switches 814
duct rodding machine 1133
Giro money-transfer system, computers for 234
paging system using pocket telephones, market survey 1008
telephone kiosk of new design 187. *Letter* 272
see also Telephone
General Telephone and Electronics Laboratories, high-energy liquid laser 459
Generating plant, transport of 239, 240
Generator(s)
ac, marine brushless, Laurence, Scott & Electromotors Ltd. 157
bulb turbine integrated unit 18
design trends 237
diesel, portable, Diesel Minigen 298
gas-turbine, Olympus, for Netherlands 705
silencing 938
isotopic power, symposium, AERE 84
portable, Amp Champ 1050
tachometer, flameproof AEI 1139
turbine sets, Longannet power station 1016
660 MW 67
see also Alternator
Genevac Ltd., vacuum feed-through collar and microcircuit jig 730
Gentry, A. E., HL-10 lifting-body re-entry vehicle 540
Geological and geophysical investigation (trade publication) 302
Geological processes, synthetic materials by duplication of 247
Geological Society of London, symposium on Upper Carboniferous Rocks 214
Geophysical and geological investigation (trade publication) 302
Geothermal power, prospects of greater use 285
Gerber Scientific Instrument Co., tape controlled drafting system 468
Germanium diodes, automated assembly, AEI 899
Germanium power rectifier technology, by R. Wells (book) 649
Gerrard, J. & Sons Ltd., Manchester abattoir 69
Gerstl, J. E., on Engineers: the Anatomy of a Profession (book) 951
Geyer, J. C., on Water and Wastewater Engineering Vol. 1 (book) 691
Ghia, Pampero motor car 888
Vanessa motor car 888
Gibb, Sir Alexander, early Severn Bridge Scheme 450
Giclair 900 magnifier 417
Gifford, E. W. H., & Partners, National Building Frame 232
Ocean terminal at Southampton Docks 544
Gifford, F., Concrete Society inaugural meeting 699
Gilbert Genie motor car 752
Gilbert, K. R., on Machine Tool Collection (book) 301, 1077
Gilbrech, D. A., on Fluid Mechanics (book) 1035
Giles, J. G., differential transmission systems 654
Gill, S., Information Scientists' conference 140
Gillier, V. A. W., on Fundamentals of Motor Vehicle Technology (book) 37
Giloi, W., operation of hybrid computers 1064
Ginger joint, Mitral valve and 745
Girder decks, bridge, orthotropic, P. J. Dowling 677
Girdlestone Pumps Ltd., direct-coupled 4-in. pumps 1143
glandless diaphragm pumps 948
Giro money-transfer system, computers for, GPO 234
Giugaro, G., motor car stylist 887
GKN Group Research Laboratory, GKN Model E spark-erosion machine 859
GKN & Square Grip Reinforcement Ltd., steel reinforcement for motorway interchange 275
Glacier Metal Co. Ltd., power losses due to lubricant friction 632
Glands, cable, for flameproof applications 26
Glascodine, R. D. S., industry and university collaboration 52
Glasgow, electrification of suburban railway system 894
Glass, float, Pilkington 418
radiation, Clearshield range of (trade publication) 1146
Glass bottles, inspection machine for 244. *Letter* 487
Glass capacitors (trade publication) 336
Glass fibre/Noramite laminate for substation enclosures 56
Glass-fibre welding helmet, Murex 858
Glass heater panels, Pilkington 552
Glass-melting furnace, platinum equipment for 325
Glass Tubes & Components Ltd., platinum equipment for glass-melting furnace 325
Glassey, W. C., on Theory and Practice of Time Study (book) 36
Glasswork, laboratory (trade publication) 84
Glazing, double (trade publication) 428
GLEEP nuclear reactor, development review 669
Glen Line, cargo ship *Glenalmond* 1011
Glenfield & Kennedy Ltd., Grafham Water reservoir 154
Glinkov, model tests on furnaces 807
Gloucester Railway Carriage & Wagon Co. Ltd., frieght bogies (trade publication) 38
Glovers (Chemicals) Ltd., acid inhibitors (trade publication) 650
Glue machine, Glu-print 763–764
Glu-print glue machine 763–764
Glycerine (trade publication) 1036
G. & M. Plant Power Co. Ltd., Gainmaster booster for battery driven vehicles 930
type LM65Y marine diesel engine 643
Gold plating, high-speed, PMD 1023
'Golden Gain' fork lift trucks (trade publication) 84
Goldsmith, L. D., steam car 704
Goodearll, economic spans 678
fatigue stress in girder decks 678
Goods elevator, Barron & Shepherd Ltd. 167
Goodson, Albert, new technique for relief maps 839
Goodyear Aerospace Corp., brake system for space research 353
collapsible radio mast 535
Goonhilly Downs ground terminal 937
Gopal, E. S. R., on Specific Heats at Low Temperatures (book) 37
Gordon and Gotch Ltd., Thomas 100-station Auto-Sorter collating machine 685
Gosport Queen, ferry with Schottel propulsion 283
Götaverken, diesel engine development and operational experience 1054
Gotland high-voltage dc power transmission scheme 546
Gottler, H., on Applied Mechanics (book) 335
Gould, S. H., on Variational Methods for Eigenvalue Problems (book) 469
Gould shaker plum harvesting machine 486
Goulder, J. & Sons Ltd., Goulder Mikron gear testing instrument 466
Governor, for gas appliances, Parkinson Cowan 73
gas service (trade publication) 428
Graco fluid pressure modulating controllers 327
Graco Under-Boil low pressure airless paint spraying system 327
Graco Vis-Con paint heater and modulating controllers 327
Grader, motor, VEB 252
Grafham Water reservoir scheme 282
constructional details 151. *Letters* 314, 355
pumping stations 154
Graham, S., low cost computer service 704
Grain, butyl rubber bag for 247
Grain drill, Allis-Chalmers 1053
Grain dryer, Multivac, Ransomes, Sims and Jeffries 147
Grain drying and storage trends 1052
Gramac (Mechanical Handling) Ltd., Miniway conveyors 248
Gramoxone W herbicide, Plant Protection 792
Granada Guildhall lecture, telecommunications F. C. McLean 789
Grand Union Canal, garage extension over 835
Grant(s), investment, increase in 999
training, for semi-skilled trades 999
Grant & West Ltd., cable end protection thimble 204
Grantham, J., traffic lights 398. *Letter* 573
Granular material, movement of 1078
Granulator, plastics, Homa 902
Granulator cutters, Spruemaster 248
Graphs, understanding, by S. A. Knight (book) 775
Grass cutter for motorway banks 882
Gratings, diffraction 911

for metrology 912
Gray, C. S., steel prices 680
Grease gun, side-lever, Swematic 606
Grease gun nipples, Kinglok 907
Great Northern locomotive engineers, by F. A. S. Brown 561
Great Ouse Basin, water resources of 280
Great Ouse Water Authority, Grafham Water reservoir 151
Greater London Council, employment survey 310
Greatrex, F. B., quieter aircraft engines 540
Green, R. & H. and Silley Weir Ltd., cutting of evaporator for SS *Chusan* 169
Greenleaf Corp., Perpro Greenleaf indexable milling cutter 125
Gregory, M. S., on Linear Frame Structures (book) 561
Greig, J., technique 407. *Letters* 487, 707
Gresham Lion Electronics Ltd., modular power supplies 26
tape testing equipment 602
Grevelingen dam, Netherlands Delta Plan 115
Greyfriars Bridge over River Wye 360
Griffith, M. V., heat pumps 218
Griffith, R., senior training officer for Scotland 138
Griffiths, J. F., on Applied Climatology: An Introduction (book) 255
Grifo, Iso, motor car 887
Grigg, C. S. W. Ltd., roll forming machine 1075
Grimwood Heating Elements Ltd., Argonarc welding of heating elements 29
Grinding of ball bearings, air gauging for 326
Grinding machine
bench, Wolf 32
cutter, Edgwick 123
cylindrical, Newalt-Keighley 123
die (trade publication) 516
drill, Brunner 902
Edco, for concrete, stone or steel 212
electrolytic, Hammond 123
internal, Heald 123
roll, Waldrich-Siegen 123
surface, Abwood 1142
air-bearing wheel head for, Westwind 329
Lumsden 123
tool, Edgwick 123
Hofmann 211
trade publication 130
Grinding machines exhibition, Alfred Herbert Ltd. 123
Grinding points, diamond, Cavidrill 422
Gronkvist Swedish keyless chucks (trade publication) 516
Group technology, classification, coding and, conference on 1036
Group training centre. *See* Training centre
Group training schemes, information on 481
Grouting with pulverized fuel ash, British Railways 170
Grove Manufacturing Co., truck mounted cranes 80
Groves, H. W., on Aeronautical technical dictionary (book) 381
Grumbridge, J. L., on Marketing Management in Air Transport (book) 1035
Grumman Aircraft, hydrofoil craft *Corsario Negro* 1050
Grundy, R. H., simple determination of Euler loads 883. *Letter* 969
Guard(s), lathe, Silvaflame 380
machine tool (trade publication) 214
Guard railing (trade publication) 910
Gubela Chemie KG, Plastix plastic road studs 579
Guernsey, electrolytic sewage treatment plant 621
Guide to design criteria for metal compression members, by B. G. Johnston (book) 561
Guide to scientific periodicals, by M. J. Fowler (book) 1145
Guided land transport, conference on (IME) 797 798
Guided-missile destroyer, Type-82 661
Guild of Motoring Writers, Motor Show test day (Goodwood) 801
Guildline nanovolt potentiometer 27
Gun, metal spraying, Metco 77
spray, electrostatic, Mettastatic 945
Meiji Model MC 1033
Gun chuck, magnetic 32
Gunn-effect oscillators, Bell 372
Gunson's Sortex Ltd., air separator for cleaning granular products 1030
optical rock sorting machine 82
Guyson Industrial Equipment Ltd., Hansen Quick-Connective self-sealing couplings 559
Gypsum rock, silos for storage of 1135
Gyro compass, Arma Brown 1011
Mk XXX, Sperry 159
Gyro compassing in inertial navigation 90
Gyro-flo industiral fans and blowers (trade publication) 650
Gyroscope, laser, for US Navy 804

H

Haaijer, G., use of structural steel 680
Hackbridge & Hewittic Electric Co. Ltd., power supply for Pakistan Railways 56, 277
Hacksawing machines, Mundus 77
Hagglund Industrial Ltd., hydraulic motors 558
Hahn, J., on Structural Analysis of Beams and Slabs (book) 691
Halcrow, Sir William, & Partners, Clywedog Dam 755
Hales Bar dam, history of 974
Halfnight Protective Systems Ltd., steel fabrication and anti-corrosive treatment 1025
Hall & Kay Ltd., air-conditioning system in textile factory at Tongaat 938
Hallet, R., Mars landing project 703–704
Halmatic, glass fibre/Noramite laminate for substation enclosures 56
Halsbury, Lord, member of Computer Board for Universities and Research Councils 348
Hamilton, Peter, Equipment Ltd., Hy-Mac 580
hydraulic excavator 556
two-wheeled trailer for excavator transport 379
Wain-Roy 300 excavator-loader 900
Hamlin DRG2 relay coils 71
Hammersmith Hospital, Mitral valve and ginger joint 745
Hammersmith power station, description and closure of 1092
Hammond electrolytic grinding machines 123
Hammond, R., on Panama Canal (book) 171
Hams Hall power station, boiler cradles 724
Hancock & Co. (Engineers) Ltd., Hancoline HL2B oxygen cutting machine 939
IGE Mark Century 100S oxy-cutting equipment 985
Hancoline HL2B oxygen cutting machine 939
Hand-grips, vinyl, Vygrips 605
Handbook of chemistry and physics, by R. C. Weast (book) 1111
Handbook of relay switching techniques, by J. Th. Appels and B. H. Geels (book) 607
Handley Page Ltd., HP137 Jetstream transport aircraft 445
HP137 Jetstream twin prop-jet aircraft 403
Jetstream aircraft, Government finance for 481
Victor B Mk 2 strategic reconnaissance aircraft 63
Handling, and storage equipment (trade publication) 1146
Handling equipment, container, Anderston Clyde 703
drum (trade publication) 692
Handling system, storage and, Powerstor, for use with forklift trucks, A. G. Wild 464
Hands (Letchworth) Ltd., HS 801 aircraft fuselage transport problem 1122
Hands, M. L., transmitters for UHF Stations 885
Handy Angle Ltd., storage (trade publication) 214
Handy marker 27
Hangar at Brize Norton 968. *Letter* 1090.
Hanger bearing assemblies, Morganite 905
Hansen Quick-Connective self-sealing couplings 559
Hanson, A., on Introduction to Stainless Steel (book) 335
Harcostar Ltd., blow-moulded spray tank 948
Hard metals 432
Hardening, dispersion, cermets 432
Harding, H. J. B., Aberfan inquiry tribunal 1004
Harding, P., Loughborough University 100
Hardness, micro, testing machine, Reichert 149
Hardness testing equipment, Brinell, King Model-66 422
Hardy Spicer Ltd., fires in diesel multiple-unit railway trains 970
Hargreave, J. M. (Products) Ltd., curing system for aircraft sealant 311
Hargreaves, Henry, Ltd., Celmar plastic ducting 851
Haringsma, B., Information Scientists' conference 140
Haringvliet dam and sluices, Netherlands 113
Harland Fibro-glide pumps 496
Harland & Wolff Ltd., crankshaft repair technique. 396
merger announcement 49
Harleman, D. R. F., on Fluid dynamics (book) 83
Harlow, motor car workshop hiring service 441
Harlow, E., supervisory training 139
Harmonic analyser, automatic 803
Harocopos, B., on Principles of Structural Metallurgy (book) 993
Harper, J. J., on Low-speed Wind Tunnel Testing (book) 607
Harris, A., Concrete Society inaugural meeting 699
Harris, J., resolved components indicator 803
Harris, T. R., on Arthur Woolf: the Cornish Engineer (book) 1111
Hart, J. Campbell, merchant adventurers 969
Hart, R. R., unlubricated reciprocating compressor 419
Hartkemeier, H. P., on Data Processing (book) 515
Hartley, communication theory 410
Hartman, H. L., nuclear blasting 980
Harvesting machine, Hesston-260, for seed kale 354
Harveys of Hale, by E. Vale (book) 649
Harwell. *See* Atomic Energy Research Establishment
Haseler, A. E., chairman of District Heating Association 223
Haskel low-pressure high-volume pumps 559
Haskel oil-free gas boosters 559
Haslegrave, H. L., Vice-Chancellor, Loughborough University 97
Hastings, S., on The Murder of TSR-2 (book) 951
Haviland, D. W. G. L., research on machine tool demand 1066
Hawke Cable Glands Ltd., cable glands for flameproof applications 26
Hawker Siddeley Aviation Ltd.
Buccaneer naval strike aircraft 445
Flexane flexible polyurethane for short-run mouldings 1134
HS 125 twin-jet executive aircraft 445
HS748 transport aircraft 445
HS 801 aircraft fuselage transport problem 1122
HS 801 maritime patrol aircraft 445
P1127 VTOL strike fighter aircraft 445
Skydel air freight loading system 442
Trident three-jet civil transport aircraft 445
Hawker Siddeley (Canada) Ltd., Bell Captain coinless dispenser and refrigerator vending machine 880
Hawker Siddeley Dynamics Ltd., Eldo PAS communication satellite system 9
Matra Martel air-to-ground missile 54, 492
Sea Dart Ship-to-air missile 492
to tender for satellite and space probe contracts 481
Hawker Siddeley Group Ltd., cinema film 'The Engineers' 916
sale of Bristol Siddeley Engines shares to Rolls-Royce 436
Hawley, John, & Co. (Walsall) Ltd., Ringway table polishing table 299
Hawthorne, B. J., cold moulding 1062
Hay, G. M., & Co. Ltd., load cell weighbridge 242
Hay & Smart (Projects) Ltd., detachable self-propelled hopper barge 622
Hayden, J. T., on Advanced Electrical Power and Machines (book) 649
Hayters Ltd., grass cutter for motorway banks 882
rotary-type orchard mower 147
Head Wrightson & Co. Ltd., metal spraying of bearing housings 286
Head Wrightson Machine Co. Ltd., roller levellers (trade publication) 256
Head Wrightson Teesdale Ltd., dock gate for Ghana 230
Headlamp, iodine vapour, Cibie DI7 1010
Philips 1010
Headwood Ltd., machine tool guards (trade publication) 214
Heald internal grinding machine 123
Heald Machine Co., air gauging for grinding of ball bearings 326
Heart-lung machine for preservation of live kidneys 966
Heat and mass transfer in capillary-porous bodies, by A. V. Luikov (book) 607
Heat exchanger, Ramen Lamella 729
Heat flow below 100°K and its technical appli-

cations (book) 381
Heat pump
absorption cycle 216
and electric heating, by E. R. Ambrose (book) 83
application efficiencies 217
cost comparisons 218
definition 215
Engineering Outline 215
heat sources 217
installations 217
method of operation 215
performance energy ratio 215
thermoelectric cycle 216
vapour compression cycle 215
Heat transfer, concise encyclopedia of, by S. S. Kutateladze and V. M. Borishanskii (book) 37
in domestic boiler chimneys 103
in fluidized beds, hydrodynamics and, by S. S. Zabrodsky (book) 1077
Heat Transfer and Condensation in Domestic Boiler Chimneys (report) 103
Heat Transfer and Fluid Mechanics Institute, proceedings of (book) 909
Heat transfer teaching apparatus 94
Heat treatment of cold extrusion punches, PERA 682
Heater(s)
air, packaged (trade publication) 1146
Thermobloc Multipass 643
trade publication 84
furnace air-blast, Imperial Smelting 299
immersion (trade publication) 864
infra-red trolley, Infradex 809
space, Audaheat 553
warm air (trade publication) 336
warm air curtain, Dorseal 731
Heater band, ceramic cored, Cole 1107
Heater panels, glass, Pilkington 552
shutter 397
Heath, E., Conservative Party Conference 698
Motor Show (Earls Court) 752
Heating
air (trade publication) 650
and ventilating equipment industry, position and prospects 1086
central, gas, ignition unit for 25
Warmaire oil-fired system 351
district, by F. B. Turpin (book) 775
for new towns 838
Rowlatts Hill scheme, Leicester 748
electric, heat pumps and, by E. R. Ambrose (book) 83
for forging, symposium on 771
induction, solid-state control for 1104
intermittent, economies of 600
oil fired district, for Highland Holiday Centre, Aviemore 922
propane fired system 296
space, gas-fired units, Monarch 440
swimming pool, Potterton 661
ventilating and air conditioning equipment, output and order trends 438
Heating elements, Argonarc welding of 29
for hardening concrete 856
Heating equipment, induction, Delapena 724
Heating furnace, AEI 601
Heating panels, skirting board, Panel-Track 163
Heating tapes, pipe, Isotape 787
Heating unit, infra-red, Claudgen 987
testing in house on factory roof 620
Heating and Ventilating Research Association, economies of intermittent heating 600
Heating and ventilating year book 1966 (book) 469
Heaviside, O., operational calculus 408
Heavy Engineering Equipment Ltd., GMG 2-70 universal loader 468
motor grader 252
Hedgecutter, tractor-mounted, Fisher-Humphries 146
Hedin Furnaces Ltd., industrial electric ovens 602
Heenan, Cardinal, conference of Institute of Directors 874
Hees, Karl, Hestika lathes and automatics 210
Heginbotham, H., interesting sixth-formers in engineering 10
Helically wound tubing, Metsec 461
Helicopter cargo hook, Cargo Aids 512
Helicopter operations training ship *Engadine* 534
Heliscan tube inspection equipment 641
Helium, liquefied 518
Heller universal machining centre with numerical control 77
Hellstrom, G., Götaverken diesel engines 1053
Helmet, welding, glass-fibre, Murex 858
Helmsman, automatic, Arkas 1011
Helsinki International Trade Fair, lack of British representation 394
Helsinki traffic control system 536
Henessey, Sir Patrick, Motor Show (Earls Court) 752
Henize, K. G., photographic experiments in space 1065
Henley Forklift Co. Ltd., forklift trucks (trade publication) 1078
Henrion, F. H. K., telephone kiosk 272
Henry, J. J., & Co., Lykes Line sea barge Clipper 925
Henson, B. H., supervisory training 139
Hentrich, H., cooperation between architect and engineer 680
multi-storey buildings in Germany 679
Heparin, bonding to plastic surfaces 170
HepSleve system of drainage 121
Hepworth & Grandage Ltd., petrol engine components 148
Hepworth Iron Co. Ltd., HepSleve system of drainage 121
Herbert, Alfred, Ltd., grinding machines exhibition 123
inspection equipment (trade publication) 1112
Iron Worker shearing machine 210
new factory at Daventry 656
new factory at Falmouth 656
No. 2 Senior Monoslide lathe 1068
scholarship and bursary, Warwich University 95
Herbicide, Gramoxone W, Plant Protection 792
Preeglone, Plant Protection 792
Vibrajet spray nozzle for 792
Hero rotary cup oil burners 1104
Herold, P. G., mine waste material 850
Hersee, E. H. W., on Simple Approach to Electronic Computers (book) 335
Hertz Rent-a-Van Division, ultrasonic vehicle washer 187
Hesston-260 harvesting machine for seed kale 354
Hestika lathes and automatics 210
Hetherington, R., computer program for turbine blade temperature 1070
Hewlett Packard Ltd., establishment of 988
Model 180A oscilloscope 644
Heygate & Sons, automatic mixing and weighing system at Bugbrooke Mill 1066
Heyl & Patterson Inc., fluid-bed drying plant for coal 808
Hiab lorry loading equipment 556
Hiab 174 lorry loader 853
Hi-Break fuse switch 1140
Hick Hargreaves & Co. Ltd., blowers (trade publication) 608
Hi-duct trunking (trade publication) 952
Higginson, G. R., on Elasto-hydrodynamic Lubrication (book) 561
High explosives and propellants, by S. Fordham (book) 817
High performance driving for you, by T. Wisdom (book) 469
High polymer latices, by D. C. Blackley (book) 301
High Precision Equipment Ltd., milling machine (trade publication) 256
Transrol planetary screws 990
High pressure engineering, conference on, IME 256
High-speed photography, by R. F. Saxe (book) 335
High-temperature controls, White-Rodgers Ltd. 163
High temperature service, steels for (book) 1145
High-temperature use, technology and properties of ferrous alloys for, by M. G. Germill (book) 301
High voltage insulation in vacuum, symposium on 952
Higham, F., director-general of Motor Agents' Association 697
Highland Holiday Centre, Aviemore, oil fired district heating for 922
Highland Tourist (Cairngorm Development) Ltd., oil fired district heating for Highland Holiday Centre, Aviemore 922
Highway. *See* Road
Highway Research Board. *See* United States
Hilger-IRD Ltd., Dynacarb analyser for carbon in steel 600
Hilger & Watts Ltd., inspection enlarger 251
Hill, A., substation enclosure 56
Hill Equipment Ltd., automatic dynamometer 329
Hillman Hartwell Imp, motor car 801
Hillman Hunter motor car 625, 754
Hills-McCanna Ltd., McCannaflo ball valves 1028
Hills Precision Die Casting Ltd., automatic die casting machines 1008
Propathene polypropylene mouldings in motor cars 626
Hilmor Ltd., hydraulic benders (trade publication) 84
Hi-Load roller and rocker type bridge bearings (trade publication) 734
Hinde, P., on Fortune in the North Sea (book) 301
Hines, W. A., Noise control in Industry (book) 515
Hinkley Point B nuclear power station 1084
Hino Motors Ltd., exhibits at Commercial Motor Show 580
Hinton, Lord, on CEI 919
presidential address, IME 616
Hintze, G., on Fundamentals of Digital Machine Computing (book) 863
Hird-Brown Ltd., light projector 1107
miniature photoelectric receivers 990
Minophon sound level meter 461
Hire plant (trade publication) 818
Hirst, A. W. C., works training for engineers 186
Historic railway disasters, by O. S. Nock (book) 111
Historical engineering equipment, sale of 535
History, British railway, bibliography of, by G. Ottley (book) 561
men, machines and, by S. Lilley (book) 83
of the World's Motorcycles, by R. Hough and L. J. K. Setright (book) 607
social, of engineering, by W. H. G. Armytage (book) 171
Hi-Way Airportable maintenance tower 403
HMB moisture meter 497
Hobbing machine, automatic, for starter-ring teeth 81
Vari-feed system in, Perkins 682
Hodge Clemco Ltd., Mighty Mite white-line erasing unit for road surfaces 602
Hodge, J., hon. degree by City University 659
Hodgkin, D. Crowfoot, school science conference 4
Hodsman, J. & Sons Ltd., drawing racks (trade publication) 818
Hoesch Aktiengesellschaft, hf pipe welding machine 297
Hoesch steel pipe making equipment 227
Hoffman Electronics Corp., sun-powered television translator 966
Hoffmann Manufacturing Co. Ltd., automatic bearing assembly machine 369
Hofman, E., immigrant workers 569
Hofmann Type AB175 precision tool grinding machine 211
Hogg, Q., conference of Institute of Directors 875
Höhn, E., on Dictionary of Electrotechnology: German–English (book) 1035
Hoist(s), passenger, for high aerials 832
passenger/goods, Mark Va, flexibility of 903
Mark Va, Wickham Engineering 903
rigging, Sky Climber 724
Scando system, for construction sites 721
see also Crane; Gantry; Transporter;
Holden, A., on Nature of Solids (book) 255
Holden & Brooke Ltd., pumps (trade publication) 910
Holden, J. T., vacuum metallizing 1026
Holland & Hannen & Cubitts Ltd., Balency-system houses for Woolwich–Erith project 832
Holland, L., vacuum deposition 612
Holliday, L., on Composite Materials (book) 691
Holman Bros Ltd., lightweight rock drill 945
Holman Rotair compressor 574
Hologram, as aircraft landing aid 804
definition of 1079
resconstructing images from 1079
Hologram interferometry 1080
Holography
applications of 1080
basic principles of 1079
definition of 1079
Engineering Outline 1079
for engineering measurements, NPL 74
future developments 1082
history of 1079
practical limitations 1081
Homa Engineering Ltd., plastics granulator 902
Homopolymer powders, propathene, ICI 331
Honda diesel engine in tractor 1053
Honda P50 moped 923

Honda S800 motor car, description of 712
Honeywell computer-controlled anti-submarine warfare attack trainer 743
Honeywell Controls Ltd., computer model-120 with memory speed 3 μsec per character 767
tape drive system 7600, 1031
Honeywell Inc., laser gyro 804
Honing and boring machines, Teha 514
Honing machine (trade publication) 562
Hook, cargo, helicopter, Cargo Aids, 512
Hooker process of forward extrusion 866
Hoover Ltd., Keymatic-3226 automatic washing machine 197
Ho-Pac vibratory soil compactor 946
Hopkinson, J., contribution to engineering design 408
Hopper(s), vibratory, electromagnetic 168
Hopper barge, detachable self-propelled 622
Hopper, D. S., Information Scientists' conference 140
Hopper feeder, pneumatic, Vac-U-Max 514
Horden Colliery, moisture measuring head for small coal 1025
Hordern, P., British *v* American computers 575
Hore, R. A., Advanced Studies in Electrical Power System Design (book) 37
noise from pump motors 640
Horlock, industry and university collaboration 53
Horne, C. & Co. Ltd., metal spraying of bearing housings 286
Hornsby, L. Profile of East Germany 469. *Letter* 574
Horsepower rating methods (trade publication) 1036
Horsley, R. A., on Shell Polyolefins Engineering Design Data (book) 286, 301
Horton, R. G. (Engineers) Ltd., Grafham Water reservoir 154
Hose, suction, pvc heavy-duty, Kanaflex 774
Hose connector, cable and, rotatable, AEI 424
Hose making machine, vacuum 601
Hospital, Hammersmith, Mitral valve and ginger joint 745
Hot Rod coolers, Scott McQuay 1144
Hotel, floating, Amsterdam 920–921
Hother-Lushington, S., inefficent lubrication design 632
Hotpoint Ltd., Hotpoint-1501 automatic washing machine 202
Supermatic washing machine 703
Hotpoint-1501 automatic washing machine 202
Hough, R., on History of the World's Motorcycles (book) 607
House(s), Balency-system for Woolwich–Erith project 832
Houseman & Thompson Ltd., Houseman-Vapo combustion control process 1104
Houseman-Vapo combustion control process 1104
Housing, Industrialized, and the Architects, conference on 864
Housing construction (trade publication) 608
Hovercraft, hoverfreighter 925
Hoverfreighter hovercraft 925
Howard, John, & Co. Ltd., Severn Bridge contract 453
Severn Suspension Bridge 456
Howden, James, & Co. Ltd., Transrice control units 371
Howe, V. A., & Co. Ltd., variable speed drive 1029
Howells, J. G., strain gauges 738
Howlett, R. W., skills analysis training 182
HP137 Jetstream twin prop-jet aircraft 403, 445
H.P.C. Engineering Ltd., tandem compressor 553
HS125 twin-jet executive aircraft 445
HS748 transport aircraft 445
HS 801 aircraft fuselage transport problem 1122
HS801 maritime patrol aircraft 445
Huddersfield College of Education (technical) 699
Huddie, D. P., committee to coordinate gas turbine aircraft engine policy 436
Hughes Aircraft Co., communication satellites 934
NADGE system 101
Hughes, F. H., Diamond Research Laboratories Research results 603
Hughes, W. F., on Electromagnetodynamics of Fluids (book) 817
Hull connecting technique at sea, Mitsubishi Heavy Industries 355
Hull docks, end-loading berths for 227
Hult, J., on Creep in Engineering Structures (book) 909
Hum due to magnetostriction 777
Human body in equipment design, by A. Damon, H. W. Stoudt and R. A. McFarland (book) 427
Human operator in complex systems, conference on 221
Humber estuary, tidal model of 275
Hume, K. J., Loughborough University 99, 100
Humphreys, model tests on boilers 807
Humphris & Sons Ltd., cut-to-length line for coiled aluminium strip 987
Hungarian Synthetics Research Institute, Polikon metal adhesive 25
Hunslet East oil rail terminal 1009
Hunslet Engine Co. Ltd., gearboxes (trade publication) 650
Hunt, Herbert Ltd., Flutomatic flute milling machine 1025
Hunter, Sir John, chairman, Associated Shipbuilders Ltd. 534
chairman, Central Training Council 224
Hunter motor car, Hillman 625, 754
Hunterston B nuclear power station, proposals for 1015
Hunting Geology & Geophysics Ltd., geological and geophysical investigation (trade publication) 302
Hunting tooth limit switch, Brookhirst 1028
Hurst R., multiple production in shipbuilding 921
Husky range of forklift trucks (trade publication) 1078
Hutchings, D., school science conference 5
Hutchinson, Sir Joseph, president, British Association 347
Hutchinson, Sir Kenneth, potential of natural gas 958
Hutter process of boiler cleaning 458
Hutton, S. P., cavitation 1040
on Engineers: the Anatomy of a Profession (book) 951
Huwood, stable hole elimination equipment 55
Hyams, H. on Petroleum Cargoes: Measurement and Sampling (book) 129
Hydema, A/S, Hydema central gear 940
purse and trawl winch 940
Hydra-Muscle Hydraulics Ltd., Vosper electro-hydraulic steering gear 158
Hydrapulper for pulp and paper mill 496
'Hydrashear' precision hydraulic plate shears (trade publication) 38
Hydraulic actuators, Lockheed Precision Products Ltd. 159
Hydraulic benders (trade publication) 84
Hydraulic boom for transmission line repair 1061
Hydraulic checking units, Hydrocheck 333
Hydraulic coupler, quick-action, Pioneer 1139
Hydraulic fitting in stainless steel 648
Hydraulic loader, Econmobile 298
Hydraulic motors, Hagglund 558
Staffa 606
Hydraulic power packs, Fairey 557
Hy-Pro GP 689
Hydraulic press. *See* Press
Hydraulic Projects Ltd., Hy-Pro GP hydraulic power pack 689
Hydraulic pump. *See* Pump
Hydraulic system, Concorde airliner 321
Hydraulic tipping gears, Edbro 505
Hydraulics, fluvial, introduction to, by S. Leliavsky (book) 733
Hydraulics Research Station, Grafham Water reservoir 152
Hydrocheck hydraulic checking units 333
Hydrochloric acid for scale removal 490
Hydrodynamics and heat transfer in fluidized beds, by S. S. Zabrodsky (book) 1077
Hydroelectric power station, Churchill Falls, construction plans 747
Hydrofoil boat, runabout, Hy-Foil 1091
Hydrofoil craft *Corsario Negro* 1050
Hydrogen, as rocket fuel 518
for fuel cells for vehicle propulsion 928
Hydrometeorology, introduction to, by J. P. Bruce and R. H. Clark (book) 515
Hydro Quebec, Churchill Falls hydroelectric power station 747
Hydro-stabil axle unit 558
Hydrostatic extrusion 871
Hydrostatic transmission for tractors 1052
Hydrostatic transmission system 560
Hydrovane stationary compressors 560
Hy-Foil runabout hydrofoil boat 1091
Hylite 65 titanium alloy 331
Hy-Mac 580 hydraulic excavator 556
Hymatic Engineering Co.
compressed air (trade publication) 952
field failure and reject rate reduction methods 1087
fluid control systems (trade publication) 172
Hydrovane stationary compressors 560
Hymatic valve 406
unlubricated reciprocating compressor 419
Hypactor extrusion press for Magnox nuclear fuel cans 423
Hypervelocity gas-gun for re-entry research 508
Hypress compression heat 379
Hy-Pro GP hydraulic power pack 689
Hy-Spill trailer and tractor unit 506
Hytafill can contents checking equipment 509

I

IBC Transport Containers Ltd., semi-bulk container (trade publication) 130
IBM, laser colour change for computers 325
ICT Ltd., ICT Universal Document Transport document reading machine 328
ICT Universal Document Transport document reading machine 328
ICT 1905 computer at Loughborough 1046
Identification of plastics and rubbers, by K. J. Saunders (book) 691
IGE Mark Century 100S oxy-cutting equipment 985
Ignition system, transistor, Delco-Remy 543
Ignition transformer, Danfoss (London) 773
Ignition unit for gas central heating 25
Ilford Ltd., Elmo DM-16 projector 533
photographic emulsions used in Gemini-11 experiment 600
Illumination. *See* Lamp; Light; Lighting
Image converter camera, Beckman 857
Immersion heaters (trade publication) 864
Immigrant workers in Switzerland and Britain 569
Immingham, refinery at, Continental 278
Imp miniature tube cutter 167
Imp motor car, Hillman Hartwell 801
Impact cylinder, Martonair 559
Impact mounting machine, Philips, for printed circuit panels 373
Impalco Aluminium Group, Waunarlwydd factory modernization and expansion 645
Impco disc 'save all' 497
Imperial Chemical Industries Ltd.
coloured aluminium (trade publication) 214
Daltolac and Suprasec foam-making chemicals 246
Daltolac 60 and Suprasec DN rigid urethane foam insulation 370
Dulux Electrocoat electro-deposition system (trade publication) 470
filtering catalysts 551
Logicon switching system for crusher plant 1105
Maranyl A102 nylon-66 331
Maranyl A190 glass-filled nylon in colours 331
materials for unlubricated reciprocating compressor 419
Melinex polyester film 1064
prepainted aluminium (trade publication) 382
propathene homopolymer powders 331
propathene polypropylene for reeling spools 285
propathene polypropylene mouldings in motor cars 626
Silcolube Concentrate silicone lubricants 290
Silcoset silicone rubbers 248
silicone release agents for shell mouldings 70
Vibra Screw bin activators and feeders for difficult materials 939
Welvic high-softening-point polyvinyl coating materials 813
Imperial-Eastman range of system analyser for refrigerating and air conditioning systems 512
Imperial Metal Industries (Kynoch) Ltd., Multikon superconductor for magnets 1105
Imperial Smelting Corp. Ltd., furnace air-blast heater 299
zinc production automation in ISF process 815
Impulse sender, electronic, Shipton 862
Imrie, K. C., Grafham Water 314
INA Needle Bearings Ltd., electromagnetic vibratory hoppers 168
one-piece cage thrust bearing 333
Inch/metric dials for machine tools 246
Incinerator, refuse, for Derby 750
Inclusions, non-metallic, in steel (Part 2), by R. Kiessling and N. Lange (book) 951
Indicator, magnetic, Dowty Electrics 773
Induction heating, solid-state control for 1104
Induction heating equipment, Delapena 724

Industrial Acoustics Co. Ltd., silencing gas turbine generator 938
Industrial and Commercial Education-Macmillan Ltd., film loop instruction courses 662
Industrial Diamond Information Bureau, industrial diamonds (trade publication) 382
Industrial Electronic Controls Ltd., thyristor packs, oil cooled 907
Industrial Electronic Controls (Manchester) Ltd., Twinstat power controllers 729
Industrial Fastening and Automation Consultants Ltd., blind captive nuts 552
Industrial instrumentation (trade publication) 214
Industrial liaison centre, Polytechnic (Regent Street) 392
Industrial lubrication (book) 381
Industrial markers 27
Industrial Markers Ltd., industrial markers 27
magnetic clip 161
Industrial market research. *See* Market research
Industrial plant and steelwork, output and order trends 438
Industrial Pumps Ltd., submersible pump 212
Industrial Relations Advisory Service 657
Industrial Reorganization Corp., chemical plant equipment, delivery problems 136
Industrial Society, status and benefits in industry (report) 526
Industrial Training, book list 213
Industrial Training Act 572, 1003
and Implications of Management, conference on 818
effects of 224
implementation of 224
objectives of 224
Industrial training boards, activities of 225
reports of 266, 393
Industrial Training Council, activities of 225
Industrial Training Exhibition and Symposium (Manchester) 650
Industry, collaboration with universities, conference on 52
Inertial navigation
acceleration correction 89
applications 92
astro-tracker alignment 90
azimuth alignment 89
basic system 85
definition 85
Engineering Outline 85
error sources 91
gyro compassing in 90
in three dimensions 88
on stationary flat Earth 85
on stationary spherical Earth 87
over spinning Earth 88
types of systems 92
Information retrieval, colloquium on (Philadelphia) 734
computer-based 691
Information science, careers in, T. E. Allibone 482
conference on (Oxford) 140
Information scientists, position and prospects of 140
Infradex Ltd., infra-red trolley heaters 809
Infra-red emission detectors 306
Infra-red heating unit Claudgen 987
Infra-red trolley heaters, Infradex 809
Ingerman, P. Z., on Syntax-Orientated Translator (book) 427
Ingersoll, new factory at Daventry 656
new factory at Falmouth 656
Inglis, F. M., regional training officer for Scotland 138
Inhibitors, acid (trade publication) 650
Innocenti variants of BMC motor cars 887
Inns, F. M., technicians unite 883
Insertion loss measurement equipment, STC 689
Inspection, and on-line measurement, and their impact on quality conference 84
Inspection conference, National (Oxford) 172
Inspection enlarger, Hilger 251
Inspection equipment (trade publication) 1112
Inspection machines, cigarette, air blowers for, Plannair 375
for glass bottles 244. *Letter* 487
Instanter type couplings for coal hopper wagons 416
Institute of Advanced Machine Tool and Control technology, formation and activities 307
Institute of British Foundrymen, Typical Microstructures of Cast Metals, by G. Lambert (book) 607
Institute of Directors, conference at Royal Albert Hall 874
Institute of Electrical and Electronic Engineers, conference on automatic operation and control of broadcasting equipment 884
1967 Convention (New York) 562
Institute of Fuel, symposium on Flames in Industry 130
use of models 806
Institute of Information Scientists, activities of 140
conference (Oxford) 140
Institute of Marine Engineers, presidential address, by Sir Stewart MacTier 657
Institute of Materials Handling, lecture course 214
Scottish Materials Handling Conference 38
Institute of Petroleum, symposium on oil and water industries 214
Institute of Physics and the Physical Society
conference on Advances in Electron Microscopy 130
conference on electron probe micro analysis 1078
conference on elementary particles 302
conference on industrial physics and the contribution of Government sponsored laboratories 994
conference on Solid State Devices 712
conference on spark discharge 382
symposium on high voltage insulation in vacuum 952
Institute of Water Pollution Control, symposium on conservation and reclamation of water 382
Institute of Welding, Autumn Meeting 214
conference on weld defects 910
Institution of Agricultural Engineers, symposium on Agricultural Engineering 84
Institution of Chemical Engineers, symposium on computer methods for Chemical Engineer (Nottingham) 776
Institution of Civil Engineers, awards for 1965 434
presidential address, R. Freeman 785, 786
retirement of secretary 785
survey of corporate members 785, 786
Institution of Electrical Engineers
Christmas Lectures 1036
conference on acoustic noise and its control 428
conference on air traffic control systems 302
conference on automatic operation and control of broadcasting equipment 884
conference on computer technology (Manchester) 382
conference on dc power transmission (Manchester) 172, 549, 583
conference on Euston main line electrification 783, 793
conference on frequency generating and control for radio systems 1078
conference on solid state devices 172
power supply for 1970, E. S. Booth 791
second UKAC control convention 172
Institution of Electrical and Electronic Engineers, activities 698
annual dinner 698
Institution of Electronic and Radio Engineers, conference on automatic operation and control of broadcasting equipment 884
conference on computer technology (Manchester) 382
conference on MF, LF and VLF Radio Propagation 172
presidential address, E. Williams 1085
Institution of Engineering Inspection, National Inspection Conference (Oxford) 172
Institution of Engineers and Shipbuilders in Scotland, fishing vessels and their machinery, R. Bennett 834
James Watt dinner of 700
Institution of Heating and Ventilating Engineers, conference on energy for new towns 395
Institution of Locomotive Engineers, M. A. Crane Presidential Address to 576
Gold Medal award to S. B. Warder 658
Institution of Marine Engineers, medium-speed geared diesel engines, J. Neumann and J. Carr 1007
Institution of Mechanical Engineers
annual dinner 919
conference on Guided Land Transport 797
conference on high pressure engineering 256
presidential address, Lord Hinton 616
subscription of corporate members. *Letter* 7
symposium on noise 172, 640
symposium on vibrations in hydraulic pumps and turbines 130
Institution of Metallurgists, composite materials (book) 1035
Institution of Mining and Metallurgy, Advances in Extractive Metallurgy 130
Institution of Municipal Engineers, evidence to Royal Commission on Local Government 615
Institution of Production Engineers, discussion on automated assembling 692
E. W. Hancock paper by E. Hofmann 569
Institution of Water Engineers, symposium on oil and water industries 214
Instrument(s)
nickel alloy application in 74
surgical, diamond-tipped 397
testing (trade publication) 952
trade publication 1146
Instrument cases, Alton 606
multiple, Botley range of 512
Instrument exhibition, CoID 715
Instrument panels, in aircraft, lighting of 43
Instrumentation, industrial (trade publication) 214
Instruments Inc., BS & W oil contamination monitor 163
Insulated solder sleeves, Thermofit 1072
Insulation
busbar, pvc extrusion for, Marshall, 604
cavity wall, with rockwool 1140
cryogenic, Dimplar 600
cryogenic vessels 523
foam, thermographic exmination of 128
high voltage, in vacuum, symposium on 952
rigid urethane foam, Daltolac 60 and Suprasec DN 370
silicone resins 341
urethane foam applications 246
Insulator, tension, method of changing 1061
Intaro tractor-mounted Vibrajet nozzle 792
Integrals, multiple, by W. Ledermann (book) 427
Integrated circuits, SGS-Fairchild 804
Integrated operation at Fukuyama steelworks 189
Integrator, computing amplifier as 694
Intelligence, artificial, through simulated evolution, by L. J. Fogel, A. J. Owens and M. J. Walsh (book) 909
Intelligence techniques, artificial, by E. B. Carne (book) 255
Intelsat. *See* International Telecommunications Consortium
Intelsat-2 satellite 932–937
Interceptor motor car, Jensen 666
Interchange, Almondsbury, composite construction in, D. S. Bondale and P. J. Clark 678
Interferometry, hologram 1080
Inter-firm comparison rubber goods industry, centre for 1118
Interim Defence Communication Program 1050
Interlas Ltd., RT200 welding positioner 426
Intermediate Technology Development Group Ltd., buyers' guide. *Letter* 1006
International Air Transport Association, air freight export containers 788
International Association for Bridge and Structural Engineering, symposium (London) 910
International Association of Research Institutes for the Graphic Arts Industry, conference on advances in printing technology 1078
International Astronautical Congress (Madrid) 704
International Atomic Energy Agency
Directory of Nuclear Reactors (book) 993
Environmental Monitoring in Emergency Situations (book) 515
Manual of Radioisotope Production (book) 1077
Nuclear Electronics (book) 515
symposium on Radioactive Dating and Methods of Low-Level Counting (Vienna) 608
Thermodynamics (book) 129
Use of Plutonium for Power Production (book) 515
International Atomic Energy Agency Vienna, Thermal Conductivity of Uranium Dioxide (book) 1077
International Business Machines Corp., high output, small divergence laser 1023
International Caravan Exhibition (London) 971
International Chemical Exhibition-Symposium (Milan) 705
International Civil Aviation Organization, economy of long-range jet airliner 617
International Clean Air Congress and Exhibition (London), preview 571
International Clothing Machinery and Suppliers Exhibition (Sydney) 562

International Combustion Ltd., activities in Derby 350
International Combustion Products Ltd., refuse incinerator plant for Derby 750
International Commerical Vehicle Exhibition, exhibits at 505
International Computers and Tabulators Ltd.
computer-serviced engineering design facility 661
fluidic devices, reduction in manufacturing costs 1065
Multiaid computer service for NC drilling machines 398
printing balancing tabulator 1075
testing equipment unit for 1901 computer systems 162
International Conference, on aircraft noise (London) 961, 1001
on space structures 718
Underwater Activities 130
Women Engineers and Scientists (Cambridge) 734
International Congress on Magnetism (Boston, Mass.) 818
International Council of the Aeronautical Sciences, congress of 540
International Cycle and Motor Cycle Show (Earls Court), exhibits at 923
International Federation of Automatic Control, symposium on Automatic Control in Space (Vienna) 562
symposium on Identification in Automatic Control Systems (Prague) 562
International General Electric Co. of New York Ltd., IGE Mark Century 100S oxy-cutting equipment 985
International Harvester Co. of Great Britain Ltd., crawler tractor and bullgrader 1034
434 tractor with Speed Amplifier 146
International 125 crawler loader 601
Loadstar motor trucks 507
International Industrial Diamond Conference (Oxford) 603
International machine tool design and research conference 1112
International Maritime Exhibition, NAVIGARE (Helsinki) 952
International Meehanite Metal Co. Ltd., Meehanite (trade publication) 516
International Mining Congress (Moscow) 692
International Nickel Ltd., nickel (trade publication) 994
nickel alloy for instruments 74
International Nuclear Industries Fair (Basle) 440
International 125 crawler loader 601
International Organization for Standardization, freight containers 1047
International Radio Consultative Committee (Oslo), colour television discussions 187
International Rectifier Corp., controlled rectifiers 722
semiconductorkit zener diodes 803
silicon rectifiers, replacement for valves 334
Zecon zener diodes 1139
International Research and Development Co. Ltd., materials testing (trade publication) 1146
International Road Federation, Conference (London) 578
fifth world meeting 525
'Man of the year' award, R. W. Whitton 525
International Road and Traffic Networks Engineering Exhibition (Imperial College) 578
International study symposium on fuel cells (Brussels) 1146
International symposium on magnetohydrodynamic electrical power generation (Salzburg) 105
International Telecommunications Satellite Consortium 932
International vehicle testing station (Vienna) 104
International Welding Exhibition (1967) 38
Intersonde Ltd., potentiometer slave units 690
INTHERM 67 (Stuttgart) 470
Introduction to electrotechnology, by S. J. Kowalski (book) 775
Introduction to hydrometeorology, by J. P. Bruce and R. H. Clark (book) 515
Introduction to the method of characteristics by M. B. Abbott (book) 213
Introduction to safety at sea, by J. W. Bull (book) 1111
Introduction to stainless steel, by J. G. Parr and A. Hanson (book) 335
Inventions and discoveries, dictionary of, by E. F. Carter (book) 863
Investment grants, increase in 999
Investment grants scheme 957
Invoicing machine, electronic, Computyper 985
Iodine vapour headlamp, Cibie D17 1010
Philips 1010
Ion exchange demineralising of water 103
Ion exchange softening of water 103
Ionization, gas composition by 389
smoke detection by 389
Ionization chambers 384
Ionization devices 386
Ipswich, proposals for expansion of, Shankland, Cox & Associates 480
Iranian Navy, destroyers for 762
Iron, cast. *See* Cast iron
malleable, industry (trade publication) 1036
spheroidal-graphite, for bridge bearing 120
Iron industry, Black Country, by W. K. V. Gale (book) 213
Iron ore, magnetic concentrator for 644
Iron oxide pigments, BS 104
Iron and steel industry, Latin America, Trade mission to 917
Iron and Steel Industry Training Board 225
annual report 266
Iron and Steel Institute, Black Country iron industry (book) 213
conference on Corrosion at Joints in Constructional Materials 470
conference on strong tough structural steel 1036
Non-Metallic Inclusions in Steel (Part 2) by R. Kiessling and N. Lange (book) 951
Iron and steel works, Fukuyama 189, 488
Iron Worker shearing machine 210
Irradiation
food, Karlsruhe international conference on 28
Moon's surface 204
neutron, of silicon-iron alloys 74
of textiles, V. Stannett 204
quarantine by 28
Isaacs, A., solid-state lighting control system 884
Islander aircraft, Britten-Norman, Government finance for 481
Islander light transport aircraft 445
Iso Grifo motor car 887
Isopad Ltd., Isotape pipe heating tapes 787
Isostatic compression of powder metal parts, ASEA 766
Isotape pipe heating tapes 787
Isotopic power generators, symposium, AERE 84
Italian National Research Council, desalination plant 550
Italy, chemical industry, growth statistics 705
electricity supply industry, integration progress 144
motor industry, position and prospects of 840, 886
Italy–Sardinia dc power transmission line 1094
I-T-E Circuit Breaker Co., energy limiting circuit breaker 459
Iterative methods in structural analysis, by S. Blaszkowiak and Z. Kaczkowski (book) 1077

J

Jabsco motorized pump 292
JAC Electronics Ltd., ADAP thyristor controlled speed control and light dimmer 463
Jack, mobile air-powered, Duff Norton Type 228R 421
Jackel, R., on Leybold Vacuum Handbook (book) 649
Jackson, Sir Willis, committee on manpower resources for science and technology, 698, 701
plans for BA meeting at Leeds 439
Jaeger, T., on Principles of Radiation Protection Engineering (book) 255
Jaffee, R. I., on Refractory metals and alloys III: applied apsects (book) 733
Jaguar Cars Ltd., merger with British Motor Corp. Ltd. 93
Jaguar 420 motor car 713,802
Jaguar strike trainer aircraft 443
Jamaica, sun-powered television translator 966
James Bay-Toronto power transmission line, repair techniques 1060
Jamieson, R. R., hypersonic airliners 540
Jane's all the world's aircraft 1966–67, by J. W. R. Taylor (book) 1145
Jane's world railways 1965–66, by H. Sampson (book) 381
Japan, Akashi-Naruto straights suspension bridge proposals 1048
Japanese National Railways, Tokyo–Osaka high-speed link 486
JBM Engineering Co. (Ramsgate) Ltd., portable soluble oil pump 375
Jeanes, R. E., training in building industry 527
Jenkins, C., supervisors' wage claims 613
Jensen Motors, FF motor car 666
Interceptor motor car 666, 802
Jessop-Saville, Hylite 65 titanium alloy 331
Jet impingement elements 564
Jetstream aircraft, Handley-Page, Government finance for 481
Jetstream fuselage layout 403
Jetstream transport aircraft, HP137 445
Jetstream twin prop-jet aircraft, HP137 403
J. H. Equipment Ltd., Slimline machine clamps 421
Jig(s), and tools for schools and colleges, by F. L. Dutton (book) 733
microcircuit, vacuum feed-through collar and, Genevac 730
Jig-boring machine, Matrix No.-50 725
Jobling, James A. & Co. Ltd., laboratory glass-work (trade publication) 84
Jobson & Beckwith Ltd., Jabsco motorized pump 292
Joel, R., on Basic Engineering Thermodynamics (book) 817
Johnson, K. J., review of mechanical engineering trade associations 876
Johnson Machinery Ltd., diesel alternator 1110
Johnson, Matthey & Co. Ltd., fixed torch brazing (trade publication) 302
metallizing preparations (trade publication) 910
platinum equipment for glass-melting furnace 325
Johnson, R. P., continuous composite beams 677
Johnson, V., stroboscopes 746
Johnsson, H., natural gas and the power stations 272
Johnston, B. G., on Guide to Design Criteria for Metal Compression Members (book) 561
Joint, artificial, Osborne/Ball jig-loaded Osteotomy Plate 661
corrosion at, in constructional materials, conference on 470
ginger, Mitral vale and 745
universal (trade publication) 776
Joint Committee for Training in the Foundry Industry, specimen programmes 570
Joint hanger timber, Speedy 375
Joint movements in curtain-wall structures 128
Joint sealants, Unilast 290
Jointing of electrical aluminium 293
Jointing materials (trade publication) 818
Jones, A., chairman, Prices and Incomes Board 391
Jones & Attwood Ltd., Landustrie screw pumps 991
Jones, D. H., steelfounding 127
Jones, Sir Henry, Gas Council report 714
on nautural gas conversion 3
Jones, L., supervisory training 139
Jones, N., on Basic Electrotechnology (book) 993
Jones, R. E., solid-state lighting control system 884
Joseph, A., on Physics for Engineering Technology (book) 255
Jost, H. P., committee on tribology 630
Jost report on lubrication 567
Joule magnetostriction 777, 780
Joule–Thomson effect 521
Jowett, W. G., Euston main line electrification 793
Joy Manufacturing Co. (UK) Ltd., screw compressor 946
Judge, E. T., member of Development Coordinating Committee, BISF 177
on steel nationalization 48
Judge, P. J., Information Scientists' conference 140
Jumbo Transfil Model At 8 powder filling system, large bulk containers 425
Jumping Jack earth compactor 79
Junior Institution of Engineers, general information about an institution for technician engineers (pamphlet) 863
new premises for 829
position and prospects of 829
Junior 1970 bicycle, Lines Bros. 14

K

Kabelka, J., glass-reinforced polyester under long term stress 1062
Kaczkowski, Z., on Iterative Methods in Structural Analysis (book) 1077
Kaiser, J. F., on System Analysis by Digital Computer (book) 863
KAM Double D unloader 1053
Kanaflex pvc heavy-duty suction hose 774
Kardashav, A. V., irradiation of fish preserves 28
Karlsruhe international conference on Food Irradiation 28
Katchalsky, A., on Nonequilibrium Thermodynamics in Bio-physics (book) 213
Kavanagh, N. T., recovery and handling of irradiated fuels 550
Kavanagh O'Moore & Co. Ltd., drill chucks (trade publication) 516
Kay, L., sonic aid for guiding blind persons 484
Kay Plastics Ltd., foam-polyester sheet for structural models 35
Kearns, H. J. D., machine tool industry 918
Keith Blackman Ltd., cyclones (trade publication) 734
Keithley Instruments, (U.S.A.), milliohm meter 334
solid-state amplifiers 161
Kelly, A., on Strong Solids (book) 381
Kelvin Electronics Co., ultrasonic flaw detector 379
Kelvin Hughes Ltd., transistorized marine radars 32
Kelvin, Lord, transatlantic cable 312
Kemp, A. R., continuous composite beams 677
Kemper en Van Twist Diesel NV, agreement with Ruston & Hornsby Ltd. 705
Kendall, E. J. M., on Modern Physics for Electrical Engineers (book) 909
Kendall & Gent, acquisiton by Staveley Industries from George Cohen 600 Group 656
Kendall, H., industry and university collaboration 53
Kennametal carbide tooling 723
Kennametal (Great Britain) Ltd., Kennametal carbide tooling 723
Kennametal Manufacturing Ltd., Kennametal carbide tooling 723
Kennard, C., on Building Regulations (book) 37
Kenner, G. W., industry and university collaboration 52
Kent, George, Ltd., Grafham Water reservoir 154
Kent Industrial Instruments Ltd., Titrimeters titration equipment 328
Kent Precision Electronics Ltd., solid-state control instrument for motorized regulation 418
temperature controller for up to 1 kW 26
Kenyon, William, & Sons, centenary history 129
Kerb, safety, Ellis-Trief 579
Kerensky, O. A., award by Institution of Civil Engineers 434
weldable mild steel and high-yeild steels 676
Kestner Evaporator & Engineering Co. Ltd., fluid mixer 78
rotary drum drier 986
Ketalsen Magmeter, magnetic flowmeter 376
Key, K. A., analogue computers 696
Key-seating machines, Polymat 944
Keymatic-3226 automatic washing machine 197
Keyswitch Relay Ltd., coin lock-out relay for vending machines 906
miniature relays 604
Khaikin, S. E., on Theory of Oscillators (book) 37
idlingt on sewage treatment works 790
Kidneys, heart-lung machine for preservation of live 966
Kier Ltd., Longannet power station coal supply 1017
ore terminal for Port Talbot 353
Kiersch, G., geothermal power 285
Kiessling, R., on Non-Metallic Inclusions in Steel (Part 2) (book) 951
Kincardine power station, automatic control scheme 1015
semi-automatic control system 622
D., the muddy Moulton? 101
John, & Co. Ltd., conveyor and elevator equipment (trade publication) 84
Rex Side Bow roller chain 424
King Model 66 Brinell hardness testing equipment 422
Kingfisher (Lubrication) Ltd.. Kinglok grease gun nipples 907
ingl: grease gun nipples 907
King' Cross station future of 440
Kings Norton, Lord, Elbourne Memorial Lecture 1000
Kingsnorth high voltage dc power transmission scheme 546, 583, 1098
Kingsnorth power station insulating pipes, Dick's 418
Kingsnorth refinery insulating pipes, Dick's 418
Kingston Plastics Ltd., ultrasonic welding of plastics 850
Kinnear Moodie & Co. Ltd., Victoria underground: civil engineering (trade publication) 214
Kinniburgh, W., on Dictionary of Building Materials (book) 649
Kinnis & Brown Group, Ricrosene 7 water treatment to raise pH 1071
Sudbury Wet-Metal Protector sealant 1107
Kinsella, protection of steelwork 679
Kipping, Sir Norman, Loughborough University seminars 99
Kirkbride, Alex, instrument design 715
Kirkby, J., Baird Television 446
K. & L. Steelfounders and Engineers Ltd., Hiab lorry loading equipment 556
Klinger, Richard, Ltd., jointing materials (trade publication) 818
Klingerite jointing materials (trade publication) 818
Klinte, K. Information Scientists' conference 140
Klip-lok electrical conduit clip 862
Knapton, K. S., cryogenics 623
Knee Agricultural Machinery, KAM Double D unloader 1053
Kneeshaw Lupton & Co. Ltd., optica rock sorting machine 82
Knife, air, USI 945
Knight, D. J. A., grass cutter for motorway banks 882
Knight Jack Mini-Cooper motor car with five-speed gearbox 802
Knight, J. C., energy for new towns 838
Knight, S. A., on Understanding Graphs (book) 775
Knight, S. J., town gas for forge heating 771
Kock, W. E., hologram as aircraft landing aid 804
Kodak Ltd., copying machines 598
Bimat film processing method 1131
Kodak Research Laboratories, preserving microfilm records 370
Koenigsberger, F., on Advances in Machine Tool Design and Research (book) 213
Kogan, P., British qualifications 178
Kolff & Co. NV, Selcom refrigerating unit 941
Kollbrunner, C. F., on Torsion (book) 691
Kongskilde, Flow-Base system self-emptying silos 250
pipe connector for grain handling systems 948
silo design 1053
Konti-Skan, high-voltage dc power transmission scheme 548
Kowalski, S. J., on Introduction to Electrotechnology (book) 775
KPE Controls Ltd., electric motor speed controls 1072
Krautkrämer, H., on Werkstoffprufung mit Ultraschall (book) 1077
Krautkrämer, J., on Werkstoffprufung mit Ultraschall (book) 1077
Kravtchenko, J., on Rheology and Soil Mechanics (book) 909
Kron, G., tensor analysis 411
Krug, S., temporary bridges 678
Krupp Maschinen and Stahlbau, Alvsborg suspension bridge 967
Kue-Ken jaw-type rock crusher 642
Kugelfischer fuel injection system 538
Kugler, S., cryogenics 524
Kunifer-10 sea-water circulating pipe 158. *Correction* 511
'Kunogi' method of forward extrusion 866
Kuo, F. F., on System Analysis by Digital Computer (book) 863
Kut, S., vacuum metallizing 1026
Kutateladze, S. S., on Concise Encyclopedia of Heat Transfer (book) 37
Kuznetsov, V. D., on Metal Transfer and Build up in Friction and Cutting (book) 255
Kynmore Engineering Co. Ltd., dry-reed switches 814
Micro-Clockdial, US45, and Flash 22, multi-turn precision dials 463

L

Laan en Kooy, Techn. Handel Mij NV, Scania Vabis diesel engines 941
Label(s), metal, Autofoto process for 1135
plastics, Metal Label Co. 990
signs and, self adhesive plastics, Webslight 989
Labelarm alarm annunciator system 289
Laboratory(ies), government sponsored, conference on industrial physics and 994
structures testing, BRS 143
see also National Engineering; National Physical
Laboratory furnace temperature controller, Ether 1073
Laboratory glasswork (trade publication) 84
Labour, Ministry of, industrial training activities 224
see also Manpower
Labour disputes in motor industry 1119
Labour Party Conference (Brighton) 655
Labour problems, motor industry 613
La Cellophane S.A., Terphane polyester film 1030
Ladder, adjustable, Fourway Silver-Rung 468
Lady Windsor colliery, underground radio systems 575
La Guardia Airport, runway extension over water 881
Laing, Sir Maurice, Confederation of British Industry, annual dinner 136
Lambert, G., on Typical microstructure of cast metals (book) 607
Lamborghini 400 GT motor car 886
Lambretta, Lambrettino moped 923
Lambrettino moped 923
Laminate(s), dual, for chemical plant manufacture 1062
glass fibre/Noramite, for sub-station enclosures 56
Laminated busbar in low-voltage switchgear, Ellison 243
Laminated films, polypropylene, cartons using, adhesive for 1138
Laminated plastics, by D. J. Duffin (book) 301
Lamp(s)
crystal, dc electroluminescence and 46
electroluminescent, applications of 43
characteristics of 42
special applications 44
types and construction of 42
fluroescent, battery powered, Bardic 126
for shock or vibration applications, Sylvania 1139
see also Light; Lighting
Lamp fitting, control gear integrated, AEI 689
Lamson Engineering Co. Ltd., document handling (trade publication) 994
Single Line Junior document conveyor 380
Land and Marine Contractors Ltd., underwater gas pipeline to Isele of Wight 156
Land measuring, English, to 1800: instruments and practices, by A. W. Richeson (book) 993
Land-navigation aid, blind, Arma-Brown gyro compass 405
Land and road measuring machines, Trumeter 579
Land-Rover motor vehicle, larger version 486
Land transport, man-powered, competition 9
Landing aid, aircraft, hologram as 804
Landing mats, floating, aluminium panels for 9
Landing system, STAN37/38/39 all-weather 460
Landon Kingsway Ltd., gas burner (trade publication) 428
Landustrie screw pumps 991
Langdale, N. E. on Mechanical Engineering Craft Practice and Theory, Part 1 (book) 129
Lange, N., on Non-Metallic Inclusions in Steel (Part 2) (book) 951
Langley, C. A., Euston main line electrification 793
Langridge Ltd., fluid logic in garment production 833
Lapmaster lapping machine 211
Lapping machine, Lapmaster 211
La Rance tidal power station 17
bulb sets installation 22
bulb turbines 18
capital costs 18
construction 19, 20, 21, 22
contractors 24
corrosion problems 22
distributor assembly 23, 24
generators 22
operating modes 18
regulating barrage 20
system connections 24
Laser(s)
argon, SERL 769
carbon-dioxide, SERL 770
gas, ring type, SERL 769

SERL 769
high-energy liquid, General Telephone 459
high output, small divergence using DTTC, IBM 1023
holography applications, NPL 74
portable, Scientifica 292
red and near infrared emission detection 45
semiconductor SERL 770
use in tailoring 1009
Laser beam expander-filter, Lyons 1030
Laser colour change for computers 325
Laser equipment, System Computers 947
Laser gyroscope for US Navy 804
Laser power for space ship propulsion 247
Laser ruby, Union Carbide 729
La terre armée reinforced earth 681
Latex sheet, extra-wide 326
Lathe
automatic bar (trade publication) 1112
automatic chucking, Churchill 30
capstan, automation, Nickols 422
copying (trade publication) 302
for flow-line and small-batch production BSA Tools 723
Hestika range 210
mill-roll, Froriep D850 IV 1067
No. 2 Senior Monoslide 1068
turret, Tecam penumatic programmer for 1133
Lathe guards, Silvaflame 380
Latin America iron and steel industry, trade mission to 917
Lattimer, E. R., Ltd., Osborne/Ball osteotomy plate 662
Lattimore, S., consultants and professors 623
traffic lights 574
Launch. *See* Boat
Laundries price increase dispute 739
Laurence, Scott & Electromotors Ltd., marine brushless ac generator 157
synchronous machines and starters (trade publication) 910
Lautovick conveyor system 926
Laverick, D. C., superconducting cable 718
Lavi, A., on Recent Advances in Optimization Techniques (book) 427
Law, H. R., annual dinner of Institution of Engineers and Shipbuilders in Scotland 700
Lawrence, J. R., on Operational Research and the Social Sciences (book) 733
Lawrence Pomeroy Scholarship, Ford 10
Laycock-de-Normanville overdrive 625
Leach, K., chairman of process plant working party 136
Leach, Rhodes & Walker, roof mouldings of reinforced plastic 967
Lead production by ISF process, automation of 815
Lead-silver-arsenic-sulphur synthesis system 247
Lead-silver synthesis system 247
Leak testing device, NRC VFT (very fast test) 425
Leclanché, centenary of manganese dioxide battery 1136
Leco oxygen analyser, use in vacuum degassing plate steels 983
Lectroflash electrolytic capacitors 374
Lectromatic card reader 375
Lectromec Engineering Ltd., Lectromatic card reader 375
Lectropon Ltd., Sourian type-82 connectors 1072
Ledermann, W., on Multiple Integrals (book) 427
Lee, A. M., on Applied Queueing Theory (book) 171
Lee, Charles E., Piccadilly Line history 1087
Lee-Smith Photomechanics Ltd. Autofoto process for metal labels 1135
Lee Wilson open-coil annealing plant 1108
Legerton, L. M., automated feed production plant for farm 577
Lehane, Mackenzie & Shand Ltd., Grafham Water reservoir 154
Lehigh University, prestressed bridges, tests 417
synthetic materials by duplication of geological processes 247
Leicester district heating, Rowlatts Hill 748
Lektrokit chassis construction system for circuits 1072
Lektrokit rack construction system (trade publication) 470
Lemco ceramic capacitors 162
Lemken reversible ploughs 146
Lenaghan J., President, Insitution of Engineers and Shipbuilders in Scotland 700
Length measurement, increased precision 246
Lenses zoom, Varotal, 533
Leopard cross-Channel car ferry 396
Lesser, J. E., industrialised building (trade publication) 172
Lester-Brown Machine Tools Ltd., saw sharpening machine (trade publication) 84
Unicut saw sharpening machine 380
Letter-sorting system, mechanized 698
Level gauges 386
float-operated marine tank, FIG2700 208
Level indication in bins or silos, Bin-Dex 898
Levellers, roller (trade publication) 256
Levelling machine for railways track maintenance 448
Lever Brothers & Associates Ltd., ultrasonic welding of plastics 850
Levermore, A. & Co. Ltd., Temp-Plate temperature recording declacomania 248
Leverton, H. & Co. Ltd., horsepower rating methods (trade publication) 1036
Levy, A., interactions in sulphur oxide-iron oxide systems 1064
Lewin, C. J., on Panama Canal (book) 171
Lexor Electronics Ltd., MilliQ battery charger 249
Leybold vacuum handbook, by K. Diels and R. Jackel (book) 649
Leyland Motor Corp., acquisition of Rover Co. Ltd., 1042
Leyland Motors Ltd., 5 forward speed gear box 507
Leyland Steer tractor 507
Leyland Steer tractor 507
Ley's Malleable Castings Co. Ltd., activities in Derby 350
Liberator-4027 automatic washing machine 201
Library catalogues, survey of book and card 649
LID micro-transistor 1029
Lidar light detection and ranging system 306
Lidder fork-lift truck 1142
Lift(s), electric, by R. S. Phillips 1035
Lifting attachments for concrete units 120
Lifting machines, Power Lifts 1034
Lifting magnet, General Electric 329
Lifting platform, Translift 253
Light, and sight in industry, conference on 1048
from exploding wire, NBS 75
see also Headlamp; Lamp; Lighting
Light Alloy Construction Ltd., work wagon in aluminium alloy 1143
Light dimmer and speed control, thyristor controlled, ADAP 463
Light projector, Hird-Brown 1107
Lightfoot Refrigeration Co. Ltd., refrigeration plant, Manchester abattoir 69
Lighting
fibre optics for, in motor cars 620
for hazardous conditions (trade publication) 470
in engine room of cargo ships 1011
motor vehicle, quartz iodine 532
of instrument panels in aircraft 43
street, review of value of, K. L. Duncan 619
see also Lamp; Light
Lighting control system, solid state 884
Lighting equipment (trade publication) 994
Lighting fittings, fluorescent, Osram 813
Lightning aircraft, English Electric 443
Lilley, S., on Men, Machines and History (book) 83
Limit switch, air/hydraulic cylinder, Marbaix 690
automated, Edytect Switch 425
hunting tooth, Brookhirst 1028
Limitorque Valve Controls Ltd., Zero Four electric valve actuator 1073
Lind-Air (Electronics) Ltd., plugs, sockets and connectors (trade publication) 952
Lindley, Sir Arnold, Colchester Lathe training centre 1067
Paisley training centre 962
Linear automatic control systems with varying parameters, by A. V. Solodov (book) 301
Linear circuits, elements of, by R. E. Scott (book) 381
Linear framed structures, by M. S. Gregory (book) 561
Linear particle accelerator. *See* Accelerator
Liner, Cunard Q4, automation in 11
Queen Mary, metal-stitching of propellers for 312
Lines Bros., Junior 1970 bicycle 14
Lines, Charles, & Co. Ltd., differential pressure gauge 947
Lining, tank, butyl rubber 1138
Teflon, for piping for refinery effluent 120
Linstead, Sir Patrick, industry and university collaboration 52
Lips Propeller Works, ships' propellers (trade publication) 952
Liquefiers, cryogenic applications 520
Liquid(s), aggressive, container pump for, British Central Electric 374
floating flexible tanks for storage 982
Liquid level gauge. *See* Level gauge
Lister, R. on Craftsman in Metal (book) 83
Lister, R. A., & Co. Ltd., centenary 5
diesel engines 854
hydraulic pump mounting 854
search for museum pieces 5
Listomac welding plant 856
Litho plate machine, offset, Planocop 298
Little, Arthur, D. *See* Arthur D. Little Research Institute
Little, G., award by Institution of Civil Engineers 434
Liverpool traffic system, computer-controlled 535
Liverpool University, computer requirements of small firms 308
conference on industry and university collaboration 52
Livestock slaughtering and marketing. *See* Abattoir
Livingston Electronics Ltd., Hytafill can contents checking equipment 509
tape controlled drafting system 468
Livingston Group, Add-a-Vision television monitoring equipment 988
Faxitron 804 X-ray inspection system 988
growth of 988
Livingstone Components Ltd., multiple reed relay 72
Livingstone Laboratories Ltd., milliohm meter 334
RCD-2R low-distortion oscillator 426
solid-state amplifiers 161
Lloyd, F. H., & Co. Ltd., 100 tons capacity bogie wagons 1066
Lloyd's Register of Shipping, merchant shipping losses during 1965 619
postgraduate scholarships to naval architects 138
recommendations for automatic controls in ships 788
Load cell/force transducers, Penny and Giles 1107
Load cell weighbridges, Avery 241
Load cell weighing (trade publication) 776
Load indicator, Coronet 208
Load-measuring device, Weighcell 861
Loader
crawler, International-125 601
excavator, 13 Six Offset, Ford 902
16 Six, Ford 902
Wain-Roy-300 900
hydraulic, Econmobile 298
lorry, Hiab-174 853
universal, GMG 2-70 468
wheeled, Yale and Towne 637
Loader/digger, Argenterio 146
Loading equipment, lorry, Hiab 556
Loading shovel, hydraulic, Weatherill 944
Loading system, air freight, Skydel 442
Loadstar motor trucks 507
Local Government, Royal Commission on 615
Lock(s), Volkerak shipping, Netherlands Delta Plan 116
Lock system on River Yenisei, wheeled steel basin as alternative to 787
Lockheed L-2000-7 supersonic airliner 660
Lockheed Precision Products Ltd., hydraulic actuators 159
Lockyer, K. G., on Critical Path Analysis: Problems and Solutions (book) 775
Locomotive(s)
British steam railway, by O. S. Nock (book) 993
diesel, fires in 1099
LVA24, joint development of 435
electric, for Pakistan 56
Thyristor control for 56
fuel cells in 797
shunting, for Port of Manchester, Rolls-Royce 104
steam, standard, British Railways, by E. S. Cox (book) 1145
wheelslip control in 979
Locomotive engineers, Great Northern, by F. A. S. Brown (book) 561
Lodestar direction finder 859
Lodge Cotterell Ltd., gear units for electrostatic precipitators 374
Loe, J. A., award by Institution of Civil Engineers 434
Loewy Robertson Engineering Ltd., strip rolling mill with automatic gap control 645

Lofthouse report on efficiency in road construction 6
Lofthouse, R. W., skills analysis training 182
Logan, Duncan, (Contractors) Ltd., Tay road bridge 312
Logicon static switching equipment 285
Logicon switching system for crusher plant 1105
Lomax, R. A. S., training in foundry industry 1002
Londex Ltd., alarm bells and hooters 585
Pentim variable ratio percentage timer 162
London, rush hour in, B. Castle 1000
Underground railways. *See* London Transport Executive
London Airport (Heathrow), category II landing equipment 460
new cargo terminal for 834
noise abatement arrangements 961
London Building Productivity Committee, materials handling in building industry (report) 918
London Electrical Manufacturing Co. Ltd., Lemco ceramic capacitors 162
London Fire Brigade, centenary 361
London International Engineering and Marine Exhibition (1967) 38
London Metal Exchange, operational procedure 530
London and North Eastern Railway, by C. J. Allen (book) 951
London Transport Executive
bus services revision 527
Piccadilly Line history 1087
Victoria Line, characteristics 800
civil engineering (trade publication) 214
rolling stock 800
traction equipment 1134
train performance 798. *Letter* 883
Long Acre Engineering Co. Ltd., portable trailer-mounted fire-fighting water monitor 980
Long, F., polyphenylene synthesis 992
Longannet power station
coal supply sources 1017
construction of 1015, 1016
generator sets 1016
site progress 1016
transformers for 1017
Longitudinal space-charge waves, by R. E. Trotman (book) 427
Longstaff, M., radioisotope instruments 390
Loran long-range navigation system 304
Lorry. *See* Motor vehicle
Lorry loader, Hiab-174 853
Lorry loading equipment, Hiab 556
Lotus Europa motor car 1089
Loudspeaker equipment, flameproof, Reliance 987
Loughborough University of Technology
activities and policy plans 97, 1046
computer service for civil engineers 458
future plan for, Ove Arup 97
management-technology courses for B.Tech. 98
postgraduate courses 100
research activities 100
undergraduate courses 99. *Letter* 186
Louvres, aluminium, external, Trox 425
Low, Archibald, & Sons Ltd., aluminium tanks 731
Low, Gordon, (Plastics) Ltd., butyl rubber 'pillow' tank for storing liquids 982
butyl rubber tank lining 1138
Low-speed wind tunnel testing, by A. Pope and J. J. Harper (book) 607
Low temperature. *See* Cryogenics
Lowes, nominated sub-contractors 679
LTB, Victoria Underground: Civil Engineering (trade publication) 214
Lubricant(s), selection and purchase of 634
silicone 339
Silcolube Concentrate 290
trade publication 692
Lubricant friction, power losses due to 632
Lubricating oil. *See* Lubricant
Lubrication
advisory services 634
economic and technological significance 630
education and research, working party on 630, 634
elasto-hydrodynamic, by D. Dowson and G. R. Higginson (book) 561
forced-feed, for motor cycles 923
industrial (book) 381
Jost report on 567
low temperature problems 522
service to industry, Esso 634
training, facilities available 632
use of term 631
working party on, report of 630, 634
see also Tribology
Lubrication design, inefficient 632
Lubrication equipment, compressed air and, Norgren 557
Lubrication research, need for more 632
Lucas, H. W., wheelslip control in locomotives 979
Lucas Industrial Equipment Ltd., hydrostatic transmission system 560
Lucas, Joseph, Ltd., Mark II fuel injection system 538
motor car exhaust pollution control systems 706
TCD intermittent windscreen wiper unit 706
Luikov, A. V., on Heat and Mass Transfer in Capillary-Porus Bodies (book) 607
Lummus Co. Ltd., acetylene production plant, Hull 60
Lumsden Machine Co., surface grinding machines 123
Luna-12, Moon-probe, detailed cutaway photograph of 880
Lunar Orbiter I and II spacecraft, photography of Moon's surface by 1126
Lunar sky, photometer on Moon to measure ultra-violet light in 1064
Lunar Society of Birmingham 843
Lunch, J., Loughborough University seminars 99
Lyashkov, V. B., on Deformation of Metals During Rolling (book) 909
Lykes Line sea barge Clipper 925
Lyons, Claude, Ltd.
capacitance tester with digital readout 32
Guildline nanovolt potentiometer 27
laser beam expander-filter 1030
Millivac electronic pyrometer 1138
rf millivoltmeter 291
Lyons, Sir William, Motor Show (Earls Court) 752

M

M4 motorway loosening of holding-down bolts 486. *Letter* 574
M45 turbofan aircraft engine 491
Mabey, D. H., milling with diamond cutters 603
MacCarthy, J. P., energy for new towns 838
Machine(s), and history, men, by S. Lilley (book) 83
mechanics of, by W. J. D. Annand (book) 171
by H. E. Barnacle and G. E. Walker (book) 213
Machine Control Ltd., Activ-V activated carbon air filter 166
Machine operator protection system, Proximitor Guard 986
Machine shop practice, by W. C. Durney (book) 83
Machine tool(s)
Cramic/Ferranti, for Concorde airliner 319
inch/metric dials 246
survey into age of 222
trade publication 864, 1078
Machine tool breakdowns, pilot survey into 307
Machine tool collection, at Science Museum, by K. R. Gilbert (book) 301, 1077
Machine tool control by fluidic devices 566
Machine tool demand, research on 1066
Machine tool design and research, advances in, by S. A. Tobias and F. Koenigsberger (book) 213
Machine tool design and research conference, international 1112
Machine tool dial, dual English/metric, Elliott 989
dual-reading, metric imperial translating drum 814
Machine Tool Economic Development Committee, report of 479
Machine tool exhibition, B. Elliott & Co. Ltd. 1044
European (Hanover) 1078
Machine tool feed drive system, electronic 31
Machine tool guards (trade publication) 214
Machine tool industry, output and order trends 437
position and prospects of 918, 1083, 1086
trade balance 479
Machine Tool Industry Research Assoc., foam-plastic sheet for structural models 34
pilot survey into machine tool breakdowns 307
Machine tool maintenance, by K. Sward (book) 37
Machine Tool Trades Association, annual dinner 918
Machinefabriek Thole NV, traffic barrier electrically operated 1032
Machining, cermets 431
electrochemical, with sodium chlorate 804
Machining centre, Heller universal, with numerical control 77
Multiplex (trade publication) 1078
Mackey, multi-storey buildings in Hong Kong 680
MacLellan, G., extraction towers for pulp and paper mill 496
Macready's Metal Co. Ltd., change to metric system 230
Mactac International, self-adhesive thumb tacks 461
MacTier, Sir Stewart, presidential address to Institute of Marine Engineers 657
Mac *See also* Mc
Maden, H., Loughborough University 100
Madin, John, & Partners, Dawley New Town 874
Magazines, bar feeding, automatic (trade publication) 336
Magirus-Deutz, exhibits at Commercial Motor Show 580
Magna welding unit 856
Magnaflux Ltd., eddy current unit 378
Magnarator variable area flowmeter 27
Magnesium alloys, Birmetals 424
Magnet(s)
lifting, General Electric 329
modern, new applications of, by G. R. Polgreen (book) 335
Multikon superconductor for 1105
neutron irradiation of 74
superconducting, application of 519
Magnetic clip 161
Magnetic concentrator for iron ore 644
Magnetic Devices Ltd., solenoids 773
Magnetic door catches (trade publication) 336
Magnetic flowmeter 376
Magnetic gun chuck 32
Magnetic Handles (EET) Ltd., magnetic gun chuck 32
Magnetic indicator, Dowty Electrics 773
Magnetic levitation for railway trains 1123
Magnetic perturbation scanning materials testing method 509
Magnetic storage drum (trade publication) 172
Magnetic tape recorder, Epsylon 289
Magnetic tape system 378
Magnetism, International Congress on (Boston Mass.) 818
Magnetostriction
basic phenomena 777
consequences and applications 777
definition of 777
Engineering Outlines 777
fundamental physics 778
hum due to 777
numerical values for typical ferromagnets 780
strain measurement 778
temperature effects 780
volume 777, 780
Magnetostrictive transducer system for ultrasonic cleaning 124
Magnifier, Giclair-900 417
ultra-violet emitter and, Uviscope-II 417
Magnox canned fuel elements 66
Magnox nuclear fuel cans, Hypactor extrusion press for 423
Mahindra & Mahindra Ltd., power presses for motor industry 882
Mail delivery vehicle 229
Mail sorting equipment, automatic 1065
export orders 1065
Mailing methods (trade publication) 428
Main Station/SSB transmitter 158
Maintenace, machine tool, by K. Sward (book) 37
Maintenance machines, railway track 448
Maintenance tower, Hi-Way Airportable 403
Mair, A., occupational health laboratory service 882
Major, E. R., BACIE conference 1045
Makin, J. & J. (Metals) Ltd., metal powders (trade publication) 302
Malleable iron industry (trade publication) 1036
MAN diesel engines 941
Man and motor cars: an ergonomic study, by S. Black (book) 775
Man-powered land transport competition 9
Management, and technology, Lord Hinton 616
and training 1045
Implications of, Industrial Training Act and, conference on 818
marketing, in air transport, by J. L. Grumbridge (book) 1035
New Approach to, Supervisory training 225
science in, development of 4
science, technology, education and, Lord Kings Norton 1000
Management Centre, East Midlands, seminars 99

Managers, effective writing for, by J. H. Tichy (book) 649
Manchester, Port of, shunting locomotives for, Rolls-Royce 104
Manchester abattoir
cold store and chill rooms 69
construction of 69
layout and design 68
mechanical handling 68
refrigeration plant 69
Manchester Institute of Science and Technology, International Machine Tool Design and Research Conference 1112
Manchester University, research on machine tool demand 1066
Mandelberg, C. J., skills analysis training 182
Manganese dioxide battery, centenary of 1136
Mangusta motor car 887
Mangyshlak oilfields, low temperature problems in pipelines 787
Manley, power transfer 411
Mannesmann-Export GmbH, mooring and transfer facilities 942
Manor Powis colliery, automatic coal separation from stone 205
Manpower distribution committee report 702
Manpower resources for science and technology, committee report 698, 701. *Letter* 969
Manual of radioisotope production (book) 1077
Manufacturing processes, material properties and, by J. Datsko (book) 1035
Many-electron problem, by K. S. Viswanathan (book) 775
Maps, relief, new technique for 839
traffic, Colormatic 366
Maranyl A102 nylon-66 331
Maranyl A190 glass-filled nylon in colours 331
Marathon Chemische Werken Bayern GmbH, acetylene production plant 60
Marbaix, Gaston E. Ltd., air/hydraulic cylinder limit switches 690
honing machine (trade publication) 562
Marconi Co. Ltd.
air traffic control by computer 228
colour television camera Mark VII 1087
export orders 828
Myriad computers use in Swedish Military Weather Service 484
Myriad 2 microelectronic computer 578
NADGE system 101
overhead traffic sensor 578
packaged crystal oscillators 426
Marconi-EMI Television Co. Ltd., early television transmissions 835
Marconi Instruments Ltd., electronic voltmeter (trade publication) 1146
electronic voltmeter, Type TF2604 463
industrial design activities 715
turbine blades, analysing vibrations of 1065
Marconi International Marine Co. Ltd., Lodestar direction finder 859
Seastar II navigational closed circuit television system 417
Marine control unit, Teleflex K11 967
Marine engineers, short term commissions for 657
Maritima Antares, hydrofoil craft *Corsario Negro* 1050
Maritime exhibition, NAVIGARE International (Helsinki) 952
Markers, industrial 27
Market research
analysis, interpretation and reporting 261
applications 259
context 259
defining the objectives 260
definition 259
detailed project planning 261
Engineering Outline 259. *Letters* 314, 487
industrial versus consumer 259
interview techniques 262
object 259
planning and control 260
sampling 260
techniques 261
trends and developments 263
Marketing in United States, conference on (London) 1146
Marketing management in air transport, by J. L. Grumbridge (book) 1035
Marking, H., BEA efficiency improvement programme 959
Marks, C., electrically powered vehicles 927
Marples Ridgway Ltd., ore terminal for Port Talbot 353
Marquardt Corp., Lunar Orbiter spacecraft 1128
Marron Machines Ltd., portable power tools (trade publication) 130
Super Stork range of industrial equipment 72
Vulkofix abrasive disc backing plate 72
Mars, parachute design experiments for capsule landing on 485
Mars landing project, Hallet 703–704
Marshall asphalt, sampling with core drill 1135
Marshall, C. & C., Ltd., Pvc extrusions for busbar insulation 604
Marshall Sons & Co. Ltd., Road-Marshall series H road roller 855
Track-Marshall 7S shovel 855
Martech Consultants Ltd., distribution of export traffic 142
merger with Sigma 4
Martel, Matra, air-to-ground missile Hawker Siddeley Dynamics 54, 492
Martin, B., telephone kiosk 272
Martland, L., battery driven motor car 706
Martonair Ltd., Martonair impact cylinder 559
pneumatic equipment for use in technical colleges 559
solenoid operated pneumatic microvalves 905
Marx, G., space travel by laser power 247
Maserati Ghibli motor car 886
Masonry, silicone treatment 342
Masonry saws (trade publication) 818
Mass and heat transfer in capillary-porous bodies, by A. V. Luikov (book) 607
Massey, B. & S. Ltd., forgings (trade publication) 130
logicon static switching equipment 285
Massey-Pinchart-Deny hydraulic press brake 420
Massey-Ferguson-710 tractor 146
Massey-Pinchart-Deny hydraulic press brake 420
Masson Scott Thrissell Engineering Ltd., corrugating machine for board 763
Mast, radio, 60 ft inflatable tube 535
television, cylindrical 832
Mast cranes for handling containerized cargo, Atlas 938
Matbro Ltd., cross-country fork-lift truck 904
fork lift trucks (trade publication) 84
Material properties and manufacturing processes, by J. Datsko (book) 1035
Materials, advances in, by P. A. Rottenburg (book) 83
and Design, Engineering Exhibition and Conference 864
strength of: a course for students, by P. Black (book) 691
Materials handling, in building industry (report) 918
industrial vibrators for 78
Materials Handling Conference, Scottish 38
Materials testing, magnetic perturbation scanning method 509
trade publication 1146
Mathematics of engineering systems, by F. H. Raven (book) 691
Mather & Platt Ltd., case packer (trade publication) 1112
Mather, W. H., trade mission to Latin America 917
Mather, W. L., industrial design 703
Mathieson, Olin Ltd., hydraulic and pneumatic fittings in stainless steel 648
Mathieson process for chlorine dioxide 810
Matisa track recording trolley 190
Matra Martel air-to-ground missile, Hawker Siddeley Dynamics 54, 492
Matrices for structural analysis, by S. J. McMinn (book) 817
Matrix assemblies for electronic desk calculators, Mullard 334
Matrix methods, numerical and, in structural mechanics, by P. C. Wang (book) 255
Matrix No. 50 jig-boring machine 725
Matthews & Yates Ltd., trim handling (trade publication) 256
Mattocks, G. R., model tests on regenerators 807
Maunder, L., combined arts and science course 220
Maunsell, G. & Partners, concrete for Western Avenue extension of A40 road 576
Max Arc Ltd., Port-el-ette, electric arc welding machine 467
Maxam Power Ltd.
All-Square pneumatic cylinder 205, 1133
exhibits at Fluid Power Exhibition 560
fluid logic in garment production 833
four-way valve 1133
planar turbulence amplifier 1133
pneumatically operated slab cutting and transfer unit 898
Maxaret braking unit in Ferguson R5 motor car 412, 414
Maxwell, D., secretary of BMEC 269
Maywick Appliances Ltd., powder finish on saws 851
McAlpine hydraulic augur boring ring 946
McAlpine, Sir Robert & Sons Ltd. Hunslet East oil rail terminal 1009
NINA electron accelerator 1048
McCannaflo ball valves 1028
McDonald, A., retirement as secretary, ICE 785
McDonnell Phantom fighter aircraft, British equipment for 745
McFadzean, Lord, Confederation of British Industry, annual dinner 136
machine tool industry 918
McFarland, R. A., on Human Body in Equipment Design (book) 427
McGonnagle, W. J., on Nondestructive Testing (book) 733
McGregor, Robert & Sons Ltd., slip-form paving machine 396, 1076
McIlraith, A. H., moiré fringes 914
McKenzie, J., cold extrusion 871
McKenzie, S. C., Engineering Outlines 746
McLean, F. C., telecommunications 789
McMinn, S. J., on Matrices for Structural Analysis (book) 817
McMullen, D., railway accidents report 1007
Mc. *see also* Mac
Measurement, and analysis of random data, by J. S. Bendat and A. G. Piersol (book) 171
and automation, Mesucora 67 exhibition on 38
length, increased precision 246
on-line, and inspection and their impact on quality conference 84
Measuring machines, land and road, Trumeter 579
Meat slaughtering and marketing. *See* Abattoir
Mec-Test Ltd., industrial sensor 376
Mechanical and physical properties of the British Standard En steels (Vol. 2) by J. Woolman and R. A. Mottram (book) 171
Mechanical construction equipment (trade publication) 910
Mechanical Engineering, Economic Development Committee for, bulletin on short-term trends 1086
duty remission scheme abandoned 615
report of 433, 437
Mechanical engineering craft practice and theory, Part 1, by N. E. Langdale (book) 129
Mechanical engineering design: an introduction, by G. D. Redford (book) 129
Mechanical engineering industry, position and prospects 1086
Mechanical engineering trade associations, review of 876
Mechanical handling, Manchester abattoir 68
trade publication 470, 562
Mechanical handling equipment, output and order trends 438
Mechanical handling equipment industry, position and prospects 1086
Mechanical manufacturing industry, education and training requirements 141
Mechanics
applied, by H. Gottler (book) 335
engineering, by N. O. Myklestad (book) 691
of machines, by W. J. D. Annand (book) 171
by H. E. Barnacle and G. E. Walker (book) 213
of solids, introduction to, by A. M. Freudenthal (book) 1035
structural, numerical and matrix methods in, by P. C. Wang (book) 255
Mechanism, advanced, by J. S. Beggs (book) 213
Mechanization of coal industry 528
Meddings, W. J. (Sales) Ltd., boring machine for two components 1143
universal joints (trade publication) 776
Medical refrigerator, portable, De La Rue Frigistor 458
Medical Rehabilitation Centre, 658
Medicine, and Biology, Engineering in, conference on 130
fluidics in 566
Meehanite (trade publication) 516
Meerschaum improvement of vitreous enamels 682
Megator Pumps and Compressors Ltd., water pressure booster 1033

Megerson, M. R., dimensional stability in gauge materials 246
Meiji Model MC spray gun 1033
MEL Equipment Co. Ltd., broad-band telephone equipment 161
chromatography equipment 686
Philips colour television test equipment 533
Melinex polyester film 1064
Melville, Sir Harry, Science Research Council 740
Membrane separation processes
definition of 1113
dialysis 1113
electrodialysis 1113
Engineering Outline 1113
history of 1113
limitations of 1116
osmosis in 1114
pervaporation in 1115
scope of application 1113
Memspan switchfuses and switch splitters 70
Memspel switchfuses and switch splitters 70
Memstar fuse carriers 70
Men, machines and history, by S. Lilley (book) 83
Mendoza, M., building regulations 680
waivers 680
Mercedes-Benz fuel injection system 538
Mercedes-Benz (Great Britain) Ltd., exhibits at Commercial Motor Show 580
30 ton gross train weight tractor 507
Merchant adventurers, comment on 873. *Letter* 969
Merchant ship propulsion, geared diesel engines, advantages 1007
Merchant shipping losses during 1965 619
Merchant Trading Co. Ltd., acoustic ceiling (trade publication) 172
doors (trade publication) 470
Mercoid pressure control 731
Mercury, 1100SS outboard motor 967
Mercury wetted relays, B and R Relays 375
Meredith, G. P., communicating results of research and development, symposium 614
Mergers, effects on workers 219
in modern business, by N. A. H. Stacey (book) 863
the impact on the shopfloor, comment on book 219
Mermail Group, exhibits at Europort '66 Exhibition 941
Merry-go-round railway trains, for coal supply to power stations 415
for power stations 237
ultrasonic beam switch for 763
Merryman, E. L., interactions in sulphur oxide-iron oxide systems 1064
Merryweather, fire-fighting appliances 365
Mersey Tunnel, alarm system for 230
Merseyside Productivity Association, computer requirements of small firms 308
Merton Engineering Co. Ltd., tractor shovels 853
Merz and McLellan, Aberthaw B power station 368
Cruachan pumped storage plant 1018
Longannet power station 1018
Mesucora 67 exhibition on measurement and automation 38
Metal(s)
cast, typical microstructures of, by G. Lambert (book) 607
coating of plastics with, conference on 1026
craftsman in, by R. Lister (book) 83
dispersion hardened, properties of 996
during rolling, deformation of, by I. Ya. Tarnovskii, A. A. Pozdeyev and V. B. Lyashkov (book) 909
fibre-reinforced 997
structural, application of, fracture toughness parameters to, by H. D. Greenberg (book) 733
surface treatments of, exhibition 130
Metal Box Co. Ltd., Triple Seal Crown crown cork bottle closure 1123
Metal compression members, design criteria for, guide to, by B. G. Johnston (book) 561
Metal Exchange, London, operational procedure 530
Metal fatigue. *See* Fatigue
Metal finishing, Uniform Costing Scheme for 1065
Metal Finishing Association, Uniform Costing Scheme for metal finishing 1065
Metal forming techniques and equipment, PERA 84
Metal label(s), Autofoto process for 1135
Metal Label Co. Ltd., plastics labels 990
Metal powders, spraying of 1026
trade publication 302
Metal Sections Ltd., Metsec helically wound tubing 461
Metal spraying. *See* Spraying
Metal-stitching of propellers for liner *Queen Mary* 312
Metal transfer and build up in friction and cutting, by V. D. Kuznetsov (book) 255
Metallization, vacuum, of plastics 1026
Metallization Ltd., Cosiclad chimney 103
powder spraying pistol 901
Metallizing preparations (trade publication) 910
Metallurgy, extractive, symposium on 130
powder: practice and applications, by R. L. Sands and C. R. Shakespeare (book) 951
structural, principles of, by B. Harocopos (book) 993
Metalock (Britain) Ltd., compressed air nozzles 1024
metal-stitching of propellers for liner *Queen Mary* 312
stitching of evaporator for SS *Chusan* 169
Metalworking Production, survey into age of machine tools 222
Metcalfe, F., BACIE annual conference 572
Metco Ltd., metal spraying gun 77
Meteorological kit, Weatherstation 1051
Meter(s), frequency, for monitoring power supplies, Dawe 292
Meter-Flow Ltd., BS & W oil contamination monitor 163
Metering pump, Metripump 125
Metering Pumps Ltd., Metripump metering pump 125
Methane, liquefied 517
Methanometer, portable, Model G. 70 Mk. 1, SMD 332
Method of characteristics, introduction to, by M. B. Abbott (book) 213
Metra Sigma Martech, formation of 4
Metric imperial translating drum dual-reading machine tool dial 814
Metric/inch dials for machine tools 246
Metric system, change to, BSI 508
standards organization 831
firms' changing to 230
Metrinch dial test indicator (trade publication) 776
Metripump metering pump 125
Metrology, dynamic, in printing, G. Doye 599
gratings for 912
Metron Instruments, Bantam speed reducers 989
Metropolitan Refrigeration Ltd., York refrigeration unit 986
Metsec helically wound tubing 461
M'Ewen, E., Loughborough University seminars 99
MGB motor car, Downton 801
MHD power generation
AVCO-Everett Mark V 105
closed cycle 105
international symposium (Salzburg) 105
open cycle 105
plasmas in 105
Michael Lyell Associates, roof mouldings of reinforced plastic 967
Michell Bearings Ltd., thrust meter 160
Microcircuit(s), trade publication 382
Microcircuit jig, vacuum feed-through collar and, Genevac 730
Micro-Clockdial multi-turn precision dials 463
Microdot Inc., F1G2700 float-operated marine tank level gauge 208
Microelectronics in equipment, conference on 302
Microfilm records, preserving, NBS 370
Microrok, pulp and paper mill equipment 497
Microscope, electron. *See* Electron microscope
modular, Microsystem-70 860
Microscopy, Electron, Advances in, conference on 130
Micro-State Corp., microwave sub-assemblies 418
Microstructures, typical, of cast metals, by G. Lambert (book) 607
Microsurgery, diamond-tipped surgical instruments 397
Microsystem-70 modular microscope 860
Micro-transistor, LID 1029
Microvalves, pneumatic, solenoid operated, Marton-air 905
Microvision pocket television 395
Microwave communications system, Australia 313
Microwave sub-assemblies, Micro-State 418
Midas aircraft integrated data recording system 404
Middle East Airlines, Concorde airliner requirements 1002
Midland Electric Manufacturing Co. Ltd., Memspel and Memspan 250 V switchfuses and switch splitters 70
Midland Heating and Ventilation Co. Ltd., fabric air filters 809
Midland Industries Ltd., MIL dual relay temperature control valve 424
reducing valve 73
trade publication 470
Midland Silicones Ltd., Silastoseal B multi-purpose silicone rubber 511
Mighty Mite white-line erasing unit for road surfaces 602
MIL dual relay temperature control valve 424
Miles Aviation and Transport (R & D) Ltd., air/land aircraft module link project 276
Military Engineering Experimental Establishment, dynamometer vehicle 638
Milk bottles, high speed loading of 441
inspection machine for 244
Mill(s), end, solid-carbide, Drill Service 606
rolling. *See* Rolling mill
Mill Village, Nova Scotia ground terminal 937
Miller-Betabite Ltd., tube fittings (trade publication) 818
Miller, J. A., Heat Transfer and Fluid Mechanics Proceedings (book) 909
Milling of refractory materials with diamond cutters 603
Milling cutters, Clarkson 1110
indexable, Perpro Greenleaf 125
Milling machine
flute, Flutomatic 1025
for internal gears, Staehely 681
for keyways on turbine diaphragm 764
plano ram-type, Noble and Lund 772
trade publication 256
Milliohm meter, Keithley 334
MilliQ battery charger 249
Millivac Instruments Incorporated, rf millivoltmeter 291
Millivoltmeter, rf, Millivac 291
Millom Hematite Ore & Iron Co. Ltd., spray steel-making process 708
Mills Scaffold Co. Ltd., folding-leg tableform 768
Minchin, L. T., on Gas Industry Today and Tomorrow (book) 775
Mine, coal. *See* Colliery
computers in, AEI 397
Treforgan Drift, underground radio systems 575
waste material from, research into uses for 850
Mine cables, electronic (trade publication) 608
Minette, S4 editor for ciné film 833
Mini-Cooper motor car with five-speed gearbox 802
Mini-Flood LP gas floodlight 420
Mini freewheel clutch 511
Mining Congress, International (Moscow) 692
Mining Equipment Engineering Co., stable hole elimination equipment 55
Mining machinery, output and order trends 438
stable hole elimination 55
Mining machinery industry, position and prospects 1086
Mini-Pak hydraulic hand pump 906
Ministry of. *See* Education; Health; Technology, etc
Miniway conveyors 248
Minolta, sub-miniature camera 789
Super-8 zoom projector 533
Minophon sound level meter 461
Minsk concrete works, mounting for vibrating platform 600
Mirrlees (Engineers) Ltd., oil pumps (trade publication) 214
Misco Inc., heat transfer teaching apparatus 94
Missile
air-to-ground, Matra Martel, Hawker Siddeley Dynamics 492
anti-aircraft, ET 316, British Aircraft Corp. 492
anti-tank, Swingfire, British Aircraft Corp. 492
Martel air-to-ground 54
ship-to-air, Sea Dart, Hawker Siddeley Dynamics 492
Missile exhibits, Farnborough Show 492
Mitchell, R. J., electric battery cars 1006
Mitchell, W., Portsmouth Evening News building 972
Mitral valve and ginger joint 745
Mitsubishi Heavy Industries Ltd., cargo ship *Glenalmond* 1011
hull connecting technique at sea 355
Mitsubishi-Sulzer diesel engines type RD90 1011
Mixer, fluid, Kestner 78
self-actuated, Mota 901

Mixing and weighting system, automatic, at Bugbrooke Mill 1066
Mixing unit for molasses and water, Plenty 987
M. & J. Valve Co., valves 942
MK Electric Ltd., twin switch for electric storage radiators 648
ML Industrial Products Ltd., heavy duty industrial castors 300
Model(s), films (cinema) and, civil engineering (trade publication) 1036
structural, foam-plastic sheet for 34
Model analysis of plane structures, by T. M. Charlton (book) 37
Model tests
boilers 807
Clywedog Dam 758
furnace and burner performance 806
regenerators 807
steelmaking 807
structural, at Loughborough 1046
Moderators and organic coolants, by O. Vojtech (book) 733
Modern Plastic Machinery Corp. (UK) Ltd., air ring, tubular film extrusion 376
Modern Telephones Ltd., radio telephone 398
underground radio systems 575
Modlen, G. F., Loughborough University 100
Modular power supplies, Gresham Lion 26
Modulation scanning technique 805
Module(s), electrical scale-changing, Digikit 1029
Module system of craft training 1045
Moflash Co. Ltd., Comet flashing beacon 1110
Moiré fringes
advantages of 913
applications of 914
definition of 911
Engineering Outline 911
formation of 912
history of 911
limitation of 914
properties of 912
Moisture control unit, BAMCU 1053
Moisture measurement by radioisotope instruments 389
Moisture measuring head for small coal 1025
Moisture meter, HMB 497
Molasses/water mixing unit, Plenty 987
Molecular bond distances, determining, US National Bureau of Standards 681
Moll, J. Th., vacuum metallizing 1026
Monair 2 monoblock compressors 552
Monarch gas fired space-heating units 440
Money-transfer system, Giro, computers for, GPO 234
Monitor(s), picture (trade publication) 336
Monitoring, environmental, in emergency situations (book) 515
Monitoring equipment, television, Add-a-Vision 988
Monoblock compressors, Monair-2 552
Monoslide lathe, No. 2 Senior 1068
Monostrand prestressing (trade publication) 864
Monsanto Chemicals Ltd., pyroclor fluid for transformers 1088
pyroclor transformers (trade publication) 1146
Monte Carlo method: the method of statistical trials, by Yu. A. Shreider (book) 255
Montreal Metro, rapid transit railway system 889. *Correction* 1051
Moody Group, Econmobile hydraulic loader 298
Moon, soft landing by Surveyor spacecraft 1126
surface of, irradiation 204
photography by Lunar Orbiter spacecraft 1126
telescopes on, photometer to determine practicability of 1064
Moon, B. A. M., on Computer Programming for Science and Engineering (book) 817
Moon, J. A., BACIE conference 1045
Moon-probe Luna-12, detailed cutaway photograph of 880
Moore, J. R., BACIE conference 1045
Moore Reed & Co. Ltd., Digikit electrical scale-changing modules 1029
Moore's Plant Ltd., Ho-Pac vibratory soil compactor 946
Mooring and transfer facilities, Mannesmann-Export 942
Moped, Honda P50 923
Lambrettino 923
Moped sales position and prospects 923
Morgan, E. A. Ll., industrial market research 314
Morgan Giles Ltd., Sea Truck motor boat 189
Morgan, M. B., some aspects of aircraft evolution 540
Morgan Refractories Ltd., Purox alumina tubes 991
Morganite Carbon Ltd., hanger bearing assemblies 905
Morice, P. B., Concrete Society inaugural meeting 699
Morris, A. C., on Shell Polyolefins Engineering Design Data (book) 286, 301
Morris, B. O. Ltd., die-grinder (trade publication) 516
Morris, Robert, Ltd., Transafe trolley for bored products 327
Morrogh, H., Loughborough University 99
Morse, S., encoding of signals 410
MOSC (metal oxide semiconductor) 54
Mossissey, J. L., Varian Associates in UK 1122
Mota self-actuated mixers 901
Motherwell Bridge and Engineering Co. Ltd., nickel steel storage tank for liquid oxygen 979
Motivair duplex compressor 297
Motor
electric, bifilar stepping, Unimatic 985
cooling water pump, noise from 640
synchronous, roller ratchet drive, Ferraris 462
systems, Union Carbide 1073
electric induction poly-phase (trade publication) 818
hydraulic, Hagglund 558
Staffa 606
outboard, 1100SS 967
Motor car
Abarth developments 887
Alan Frazer racing Imp 801
Aston Martin modified DB6 665
battery-driven, Carter Coaster 744
Electrovair-11 927
Ford Motor Co. 706
position and prospects of 744
Bizzarrini 887
braking systems of, modifications to 968
Buick GS 400 series 543
Carrozzeria Fissore open sports 888
Chevrolet Camera 543
crash testing techniques, Fiat 315
Daf town, OSI 888
Daf-44, description of 627
Daimler Sovereign 713
Downton Cooper S 801
Downton MGB 801
electric, Carter Coast 744
electrically driven, developments 660
estate, Ford Mk.-4 752
Ferguson four-wheel drive FF 802
Ferguson R5 prototype 412
Ferrari, at Turin Motor Show 886
Fiat Dino Spider 841
Fiat 124 Sport Spider 840, 886
fibre optics for lighting in 620
Flying Star I, Touring Superleggera 888
Ford Cortina modifications 710
front-wheel drive, Cadillac Eldorado 575
fuel injection systems 538
gas-turbine, Firebird 929
General Motors Corp., survey of new models from US, UK and Germany 541
Ghia Pampero 888
Ghia Vanessa 888
Gilbern Genie 752
Hillman Hartwell Imp 801
Hillman Hunter 625, 754
Honda S800, description of 712
Innocenti developments 887
Iso Grifo 887
Jaguar 420 713, 802
Jensen FF 666
Jensen Interceptor 666, 802
Lamborghini 400 GT 886
Lotus Europa 1089
man and: an ergonomic study, by S. Black (book) 775
Mangusta 887
Maserati Ghibli 886
Mini-Cooper, with five-speed gearbox 802
Oldsmobile, corrosion resistance of bumpers 1123
revision in range 543
Oldsmobile Toronado, road test on 1057
Opel Rekord, new versions of 542
OSI 666
Pininfarina, with central steering position 665
plastics in 626
Pontiac, revisions to range 543
Pontiac GTO, road test on 12
racing, at Paris Automobile Salon 666
Formula-4 250 cc 358
JW4 Formula-4 358
Rallye Kadett, Opel 665
Rebel series 664
Reliant Scimitar 753
Renault-16, description and road test on 323
Rover-2000 802
safety standard's US requirements 1007
Singer Vogue 754
Stanley steam 704
Sunbeam Imp, description of 629
Sunbeam Tiger 801
Triumph GT6 802
description of 629
Vauxhall Viva 802
restyled versions of 541
vintage, auction of 103
Volkswagen-1500 665
see also Motor vehicle
Motor car deliverymen, end of strike of 957
Motor car design faults 968
Motor car engine, Buick V8 543
Cosworth F3 358
Formula 2, Ford of Britain 575
see also Engine, petrol
Motor car exhaust pollution control systems, Lucas 706
Motor car factory for Russia, Fiat 275
Motor car industry. *See* Motor industry
Motor car race, British Grand Prix, Brands Hatch 143
Motor car rail delivery, Cartic wagon for 144
Motor car repair facilities, self-service, Pinnacles motoring centre 442
Motor cycle(s)
Rickman-Metisse 923
sales position and prospects 923
Suzuki 923
technical developments 923
world's, history of, by R. Hough and L. J. K. Setright (book) 607
see also International Cycle and Motor Cycle Show
Motor grader, VEB 252
Motor industry
Finland 784
France, position and prospects of 663
Italy, position and prospects of 886
labour disputes in 1119
labour problems 613
plastics for 922, 1008
position and prospects 739
Motor Industry Joint Labour Council, activities of 1119
Motor Industry Research Association, annual lunch 1000
Motor Show (Earls Court) exhibits at 712, 752
Motor Show (Paris), exhibits at 663
Motor Show (Turin) exhibits at 840, 886
Motor Show test day (Goodwood) 801
Motor speed controls, electric, KPE 1072
Motor truck, Turbo-Titan-III 929
Motor vehicle
Bretby-Wickham underground supplies 330
coach maximum length amendment proposal 273
commercial, International Exhibition, exhibits at 505
Staybrite stainless steel for bodies of 1049
Commerical Motor Show, exhibits at 580
electrically powered, General Motors Corp. 927. *Letter* 1006
fighting, exhibition of 620
Ford D series truck range 505
Ford Transit medium van range 505
fuel cell driven, Electrovan 927
in motion, weighing of 803
lorry loading equipment, Hiab 556
mail delivery, battery operated 229
refrigerated, Warner SF400 electro-sheave clutch for 897–898
research, Sir Donald Stokes 1000
Shorland patrol car 620
truck chassis, Bedford KM range of 505
Utility Kart battery powered 54
see also Motor car
Motor vehicle bodies (trade publication) 1078
Motor vehicle industry. *See* Motor industry
Motor vehicle lighting, quartz iodine 532
Motor vehicle route planning by computer 788
Motor vehicle technology, fundamentals of, by V. A. W. Hillier and F. W. Pittuck (book) 37

Motor vehicle washer, ultrasonic 187
Motorized regulation, solid-state control instrument for, Kent 418
Motorola Inc., teleprinter 944
Motorway, M4, loosening of holding-down bolts 486. *Letter* 574
specification changes and increased cost problems 6
Motorway banks, grass cutter for 882
Motorway bridge, proposals for, Orwell 480
Motorway interchange, Almondsbury 275
Motorway system progress 1084
Motorway viaduct, Gateshead 311
Mott, Hay and Anderson, Severn Suspension Bridge 456
Wye Viaduct 499
Mottram, R. A., on The Mechanical and Physical Properties of the British Standard En Steels (Vol. 2) (book) 171
Moulding(s)
cold, reinforced plastics, development of 1062
shell, silicone release agents for 70
steelcastings, Catton & Co. Ltd. 127
short-run, Flexane flexible polyurethane for 1134
with resins (trade publication) 1078
Moulding machine, injection, Desma 609, for footwear 356
Moulton, A., Moulton Mini bicycle range 14
Moulton bicycle in bad weather. *Letter* 101
Moulton Mini Automatic bicycle 14
Moulton Mini bicycle 14
Moulton Stowaway bicycle 14
Mounting machine, impact, Philips, for printed circuit panels 373
Movement of granular material 1078
Mower, fully-reciprocating, Bamfords 147
rotary-type, orchard, Hayters 147
M & T 323 nickel plating process 718
Mucon ceramic capacitors 1072
Mufax Courier 500 facsimile communications system 684
Mufax weather chart recorders 159
Muijderman, E. A., on Spiral Groove Bearings (book) 607
Muir of Ord, Wiggins Teape paper mills, Fort William 495
Muirhead & Co. Ltd., Mufax Courier 500 facsimile communications system 684
Mufax weather chart recorders 159
quantising analogue information 325
Mull, electricity supply developments 313
Mullard Ltd.
audio amplifier unit 647
colour TV delay line 249
epoxy encapsulated transistor 463
liquid nitrogen replenisher 210
matrix assemblies for electronic desk calculators 334
Mulley, Concorde aircraft costs 480
Minister of Aviation 265
Multiaid computer service for NC drilling machines 398
Multi-channel amplifier, SE Labs 250
Multiglass Ltd., double glazing (trade publication) 428
Multikon superconductor for magnets 1105
Multiload aluminium containers 940
Multi-Packet container barge system 925
Multiple integrals, by W. Ledermann (book) 427
Multiplex machining centre (trade publication) 1078
Multiplication, analogue 695
Multi-storey buildings, and bridgework, structural steelwork in, conference on 676
in Canada, D. L. Tarlton 679
in Germany, H. Hentrich 679
in Holland, H. J. J. Engel 679
Multitemp thermocouple instruments 553
Multivac grain dryer, Ransomes, Sims & Jeffries 147
Multivent Engineering Ltd., warm air curtain (trade publication) 776
Mundus hacksawing machines 77
Murder of TSR-2, by S. Hastings (book) 951
Murdoch, J., basic statistics 271
statistics course 270
Murex Welding Processes Ltd., glass-fibre welding helmet 858
Murfitt Bulk Transporters Ltd., bulk transporter semi-trailer 506
container transfer unit 506
Murphy, G. J., on Basic Automatic Control Theory (book) 817
PRFCS pattern tracker 898
Museum, science, machine tool collection at, by K. R. Gilbert (book) 301, 1077
Museum of Science and Industry, Birmingham 842
Music board, electronic, BEL 619
Musical blackboard, teaching aid 535
Mussett, R., training in Industrial Solvents Division 878
Mutlow, J. B., *Pneumatic Logic and Fluidics* 529
Myers, F. H. E., engineers in public life 1006
Myers, Fred Ltd., American-Lincoln Model 130 pedestrian-controlled scarifier 725
Myklestad, N. O., on Engineering Mechanics (book) 691
Myriad computer, for air traffic control 228
Swedish Military Weather Service 484
Myriad 2 microelectronic computer 578
Myson Heat Exchangers Ltd., Dorseal warm air curtain 731
hot water fan convectors (trade publication) 692

N

Nader, R., visit to London 12
NADGE (Nato Air Defence Ground Environment) building consortium 101
Nairn Building Products, tercol epoxy bonder (trade publication) 952
Nameplates and badges (trade publication) 562
Nancarrow, L., Plymouth training centre 1044
NASA HL-10 lifting body 540
National Aeronautics and Space Administration, brake system for space research 353
photometer on Moon to measure ultra-violet light in lunar sky 1064
National Association of Drop Forgers and Stampers, symposium on heating in the drop forge 771
National Association of Malleable Ironfounders, malleable iron industry (trade publication) 1036
National Building Frame for precast concrete structural systems 232
National Car Parks Ltd., car park at Yield Hall, Reading 1122
National Coal Board
Aberfan coal tip disaster 743, 1004, 1048, 1087
annual report 528
ASP for coal cutting machine maintenance 682
automatic coal separation from stone 205
Bretby-Wickham Mk 2B underground supplies and salvage vehicle 330
Desford brick factory 377
district heating for new towns 838
interest in Associated Heat Services Ltd. 784
Longannet power station coal supply 1017
Merry-go-round railway trains for coal supply to power stations 415
moisture measuring head for small coal 1025
Notes for Electricians (book) 649
Rowlatts Hill district heating scheme 748
stable hole elimination exhibition, Swadlincote 55
trading report 1117
underground radio systems 575
National College of Agricultural Engineering, activities 267
National College of Food Technology, Stokes model 21 freeze drying equipment 551
National Committee for Audio-Visual Aids in Education, musical blackboard, teaching aid 535
National Computing Centre, functions of 922
National Council for Quality and Reliability 877
National Economic Development Office, productivity and efficiency advisory services inquiry 1083
National Economic Plan, comment on 135
National Engineering Laboratory, appointment of new director 615
automatic drawing machine study 227
Goulder Mikron gear testing instrument 466
roughness comparison specimen specifications 175
National Forgemasters Association, conference on forgings manufacture 836
National Gas Turbine Establishment, noise research 961
National Inspection Conference (Oxford) 172
National Physical Laboratory, combined inch/metric dials for machine tools 246
holography for engineering measurements 74
Weighcell load-measuring device 861
National Power Farming Conference (Harrogate) 650
National productivity conference 613
National Research Corp., NRC VFT (very fast test) leak testing device 425
National Research Development Corp.
annual report 346
butyl rubber 'pillow' tank for storing liquids 982
detachable self-propelled hopper barge 622
new technique for relief maps 839
support for new projects 346
Nationalization of steel industry 48
members of organizing committee 614
Natural gas
appliance conversion, Canvey Island 186
as fuel for gas turbines 704
conversion of appliances for 958
exploration in North Sea 228
for power stations 714
position and prospects of 108. *Letter* 272
for town gas, Sir Henry Jones on 3
from North Sea, position and prospects of 108
potential of, Sir Kenneth Hutchison 958
Natural gas pipelines, construction of 714
Natural gas production, North Sea 3
Natural Rubber Producers' Association, exhibits at Public Works and Municipal Services & Exhibition 853
Nature of solids, by A. Holden (book) 255
Naval Architects, Royal Institution of, member of Council of Engineering Institutions 137
training of 138
NAVIGARE International Maritime Exhibition (Helsinki) 952
Navigation, inertial. *See* Inertial navigation
sound, and ranging 303
Navigation equipment in cargo ships 1011
Navigation system, Concorde airliner 321
Navigational closed circuit television system, Seastar II 417
Naylor, Sale and Widdows, refuse incinerator, Derby 750
NCK-Rapier Ltd., boom cranes (trade publication) 172
Neale, M. J., consultants and professors 186. *Letters* 272, 623
Nederlandsche Dok en Scheepsbouw Maatschappij NV, valves 942
Needham, F. H., yield stress/ultimate tensile stress ratio 354
Néel temperature for antiferromagnetics 778
Neil and Spencer Ltd., immersion heaters (trade publication) 864
Neill-Hammond floating roofs (trade publication) 910
Neill-Varec Ltd., FIG2700 float-operated marine tank level gauge 208
Nelson, Lord, BEAMA dinner 959
Nelson River power scheme 583
Neoprene synthetic rubber pipe flashings, Trelleborgs 331
Neptune track condition recording and maintenance system 190
Nesbitt-Hawes, Sir Robert, training of youth in industry, Volume 1 'Engineering' edited by, comment on 50
Netherlands, Delta Plan for flood prevention in 110
Netherlands Dock and Shipbuilding Co., floating hotel and office block, Amsterdam 920–921
Network protector test kit, Westinghouse 686
Neubauer, L. W., simple determination of Euler loads 707. *Letters* 883, 969
Neumann, J., medium-speed geared diesel engines 1007
Neutron detectors 385
Neutron irradiation of silicon-iron alloys 74
Neutron moisture gauges 385
Neutron particles in radioisotope instruments 384
Neutron sources, sealed-off, SERL 770
Neville, J. C. Ltd., FOB threading machines 601
New applications of modern magnets, by G. R. Polgreen (book) 335
New towns, conference on energy for (Harrogate) 395
report of 838
district heating for 838
New York Central Railroad, ultra high speed operation research 326
New Zealand, high-voltage dc power transmission scheme 548
Newall-Keighley cylindrical grinding machines 123
Newcastle upon Tyne University, combined arts and science course 220

Newfoundland and Labrador Power Commission, silencing gas turbine generator 938
Newspaper cross-tying machine, Sheridan 1034
Newton Chambers Group, Calmal pickling processes 286
Nichtstationäre Probleme der Gasdynamik, by R. Sauer (book) 1035
Nickajack Dam, construction progress 973
construction requirements 975
construction sequence 976, 978
temporary cofferdam construction 976
Nickel (trade publication) 994
Nickel alloy, wrought heat-resisting, for instruments 74
Nickel coating, Dur-Ni, for bumpers 1123
Nickel plating process, M and T-323 718
Nickel steel storage tank for liquid oxygen 979
Nickols Automatics Ltd., capstan lathe automation, Nickols 422
Nife Ltd., sun-powered television translator 966
NINA electron accelerator, experimental programme 1048
Nipples, grease gun, Kinglok 907
Nippon Kokan Kabushiki Kaisha, Fukuyama iron and steel works 189, 488
Nitrile rubber (trade publication) 864
Nitrogen, liquid, automatic replenishing system 210
Nitrous oxide cylinders, contamination of 485, 576
Noble and Lund Ltd., plano-milling machines 772
Nock, O. S., on British Steam Railway Locomotive (book) 993
on Historic Railway Disasters (book) 1111
Noise
acoustic, and its control, conference on 428
aircraft, International Conference on (London) 961, 1001
electromagnetic, elimination at low temperature 519
from power plant, symposium on, IME 172
symposium on (IME) 640
Noise control in industry, by W. A. Hines (book) 515
Nomex nylon overalls for racing motorists' protection 274
Nondestructive testing, by W. J. McGonnagle (book) 733
trade publication 382
Non-electrical machinery, output and order trends 438
Nonequilibrium thermodynamics in biophysics, by A. Katchalsky and P. F. Curran (book) 213
Nonlinear pressure waves in gases, by R. Sauer (book) 1035
Non-metallic inclusions in steel (Part 2), by R. Kiessling and N. Lange (book) 951
Nonstationary flow of compressible media, by R. Sauer (book) 1035
Noramite/glass fibre laminate, for substation enclosures 56
Norgren, C. A., Ltd., compressed air and lubrication equipment 557
Normalair Ltd., combined pressure control unit 406
stainless steel check valves 250
Normand Commercial Vehicles Ltd., 30 ton gross train weight tractor 507
Normandy Ferries, *Dragon* cross-Channel car ferry 396
Leopard cross-Channel car ferry 396
Norris, J. C., milling with diamond cutters 603
Norsk Hydro production of pvc 62
North Dakota State University, heat transfer teaching apparatus 94
North East Coast Institution of Engineers and Shipbuilders, Andrew Laing lecture, R. Hurst 921
North-Eastern Electricity Board, light traffic route microwave communications system 1049
North of Scotland Hydro-Electric Board, activities of 1015
electricity supply for Mull 313
North Sea
fortune in, by P. Hinde (book) 301
gas discoveries in, Arpet 706
gas strikes in 1088
gas supplies, CEGB interest in 667
commercial exploitation 714
natural gas exploration in 228
natural gas from, position and prospects of 108
natural gas production 3
turbo drill for exploration of 228
North Sea Canal, Amsterdam, Coen Tunnel road crossing for 10
North Thames Gas Board, natural gas appliance conversion, Canvey Island 186
Northampton Polytechnic. *See* City University
Northwestern University, perception pattern tracker 898
photometer on Moon to measure ultraviolet light in lunar sky 1064
Norton Abrasives Ltd., dust control plant 467
Norton, W. E. (Machine Tools) Ltd., Aireworth up-cutting bar shearing machine 254
Notes for electricians (book) 649
Nottingham University, rotary drum drier 986
Novy, H. J., scientific management activities 4
Noyes, Eliot, IBM image 703
Nozzles, compressed air, Metalock 1024
Nozzles fitting, spray, to spray booms 639
NRX heavy water nuclear reactor 102
Nubian Major fire/crash tender 506
Nuclear blasting, feasibility of 510. *Letter* 623. *Correction* 980
Nuclear electronics (book) 515
Nuclear explosions, underground, research on 510
Nuclear fuel, for fast reactors 1149
for water reactors (trade publication) 562
irradiated, recovery and handling of 550
Nuclear fuel cans, Magnox, Hypactor extrusion press for 423
Nuclear fuel elements, magnox canned 66
plutonium, for Agesta reactor 169
Nuclear fuel processing developments 675
Nuclear fuel processing plants 674
Nuclear Industries Fair, International (Basle) 440
Nuclear magnetic resonance, broad-line 681
Nuclear power
cost of generating, British and American 675
economic development aspects 672
for water desalination 675
programme development review 670
prospects for development 675
Nuclear power industry, consortia activities 670, 671
development review 669
Nuclear power station(s)
Calder Hall, tenth anniversary 669
construction position and prospects 667
cost of British and American 675
development review 670
Dungeness A, siting considerations 670
Dungeness B, construction details 64
design aspects 64
foundation works 64
gas-cooled nuclear reactor for 656
magnox canned fuel element 66
pressure vessel 64
reactor design 67
site plan 66
660 MW turbine generator sets 67
turbine hall 67
for Finland 875
Hinkley Point B 1084
Hunterston B, proposals for 1015
position and prospects 236
Scotland 1015
Trawsfynydd, siting considerations 670
Nuclear radiation units for India 55
Nuclear reactor(s)
advanced gas cooled 533
development 672, 674
Dungeness B 64, 67
Agesta, plutonium fuel element experiments 169
BEPO, development review 669
breeder, development of 656
development review 669
directory of (book) 993
engineering development 672
fast, basic principles 1147
BR5 1150
comparison with thermal 1147
coolant requirements 1149
definition 1147
Dounreay 1150
EBR1 1150
EBR2 1150
Engineering Outline 1147
Enrico Fermi 1150
fission of fertile materials 1148
fuel element requirements 1149
power generation 1147, 1150
power units 1150
Rapsodie 1150
gas-cooled 674
for Dungeness B nuclear power station 656
GLEEP, development review 669
heavy-water moderated 674
high-flux materials (NBSR) 716
kinetics of coupled (Texas) 994
magnox, temperature limitation 672
magnox-type, development review 669
NRX heavy water 102
prospects for development 675
rocket, NRX-A5 128
seawater desalination by 533
steam generating heavy water, 533, 674, 675
and distillation plant 624
commissioning of 656
ZEEP, start-up of 101
Nuclear research, cryogenics in 519
Nuclear story, Canada's, by W. Eggleston (book) 691
Nuclear submarines, steel requirements for 311
Nuclear Test Ban Treat (1963) 510
Nuffield Foundation, teachers, retraining advocated by 50
Nuffield O-level science, publication of 50
Numerical analysis, short introduction to, by M. V. Wilkes (book) 863
Numerical control, book 255
Heller universal machining centre with 77
of drilling machines, computer program 398
of machine tools, cinema film 918
of oxy-cutting equipment 985
of production processes, symposium on 516
Numerical control techniques, Primer Logikit for teaching 459
Numerical and matrix methods in structural mechanics, by P. C. Wang (book) 255
Numerically controlled Asquith 2HD horizontal drilling machine (trade publication) 38
Nut(s), blind captive, Industrial Fastening 552
friction grip, Coronet,208
self-locking, Philidas, Whitehouse 406
trade publication 1036
Nut-runner, pneumatic, 3017ATN, Consolidated Pneumatic Tool Co. Ltd. 464
Nutting, D. C., shortage of qualified manpower 969. *Letter* 1051
NV Appingedammer Bronsmotorenfabriek, Brons diesel engine 942
NV Rekab, Verticon vertical transporter 942
Nylon, glass-filled, in colours, Maranyl A190 331
Nylon-66, Maranyl A102 331

O

O-level science, Nuffield, publication of 50
Oakes, F., solid-state lighting control system 884
Oakham Ness tanker terminal insulating pipes 418
O'Brien, R., industrial advisor to Department of Economic Affairs 657
Occupational health laboratory service 881
Ocean Prince, drilling rig in North Sea 229
Ocean terminal at Southampton Docks 544
Oerlikon Electrodes Ltd., welding screen (trade publication) 734
Office(s), modern, survey of 619
Office block, floating, Amsterdam 920–921
Office furniture (trade publication) 470
Offset litho plate machine, Planocop 298
Offshore structures for oil and gas production 590
Ohmmeter, dual range, Davis 290
Oil, and water industries, symposiumon 214
cutting, selection and purchase of, 636
underwater reserves, M. E. Spaght 584–93
see also Lubricant; Lubrication; Petroleum; Refinery
Oil contamination monitor, BS & W 163
Oil drilling, offshore procedures 584–93
Oil engine. *See* Engine, diesel
Oil exploration, offshore procedures 584–93
Oil fired district heating for Highland Holiday Centre, Aviemore 922
Oil-fired plants, industrial, chimneys for (booklet) 717
Oil fuel for forge heating 771
Oil rail terminal, Hunlset East 1009
Oil Rail Terminals (Leeds) Ltd., Hunslet East oil rail terminal 1009
Oilfield(s), Mangyshlak, low temperature problems in pipelines 787
Oilfield truck, Big Ben 506
Okun, D. A., on Water and Wastewater Engineering Vol. 1 (book) 691

Oldenburger, R., on Optimal and Self-optimizing Control (book) 469
Oldsmobile motor car, corrosion resistance of bumpers 1123
revisions in range 543
Oldsmobile Toronado motorcar, road test on 1057
Olin Mathieson Ltd.
Haskel low-pressure high-volume pumps 559
Haskel oil-free gas boosters 559
hydraulic and pneumatic fittings in stainless steel 648
Olin water absorption dessicators 559
ventilation system employing Coanda effect 987
Olin water absorption dessicators 559
Olympus gas-turbine generator for Netherlands 705
Olympus gas turbine marine developments 760
Olympus 593B turbo-jet engines for Concorde airliner, Bristol Siddeley 321
Omt-Etamic electro-pneumatic auto-sizing and machine-cycle control units 123
On-line measurement and inspection and their impact on quality conference 84
One-Eleven airliner 443
BEA order for 1084
Ontario Hydro transmission line repair techniques 1060
Opel, Rallye Kadett motor car 665
Rekord motor car, new versions of 542
Operational research and the social sciences, by J. R. Lawrence (book) 733
Opico, Danuser Digger dual-purpose tractor-mounted borer 858
Gould shaker plum harvesting machine 486
Hesston-260 seed kale harvesting machine 355
turbocharger unit for tractors 774
Oppenheim, Sir Duncan, member of Development Coordinating Committee, BISF 177
Optimal and self-optimizing control, by R. Oldenburger (book) 469
Optimal adaptive control systems, by D. Sworder (book) 469
Optimization techniques, recent advances in, by A. Lavi and T. P. Vogl (book) 427
Optische Werke Steinheil Sohne GmbH, Oscillophot recording camera 907
Orbital pipe weld scanner for tube 33
Orbital piston hydraulic pump 404
Ore, iron, magnetic concentrator 644
Ore terminal for Port Talbot 353
Orenstein and Koppel, hydraulic excavator 946
Organic coolants and moderators, by O. Vojtech (book) 733
Organic material, storage of 519
Organization for Economic Cooperation & Development, Dragon high temperature reactor project 371
Orion drilling rig 1088
Orthotropic bridge girder decks, P. J. Dowling 677
Orwell, proposals for motorway bridge 480
Osborne/Ball jig-loaded Osteotomy Plate artificial joint 661
Oscillators, Gunn-effect, Bell 372
low-distortion, RCD-2R, Livingston 426
packaged crystal, Marconi 426
theory of, by A. A. Andronov, A. A. Vitt and S. E. Khaikin (book) 37
Oscillophot recording camera 907
Oscilloscope, Model 180A, Hewlett-Packard 644
OSI, Daf town motor car 888
OSI motor car 666
Osmosis, in membrane separation processes 1114
reverse, in desalination plant 550
Osram-GEC Ltd., fluorescent lighting fittings 813
Osro-pol polishing and burnishing machine 465
Ottley, G., Bibliography of British Railway History (book) 561
Outboard motor, 1100SS 967
Ovens, industrial electric, Hedin 602
microwave industrial heating 168
Overalls, Nomex nylon, for racing motorists' protection 274
trade publication 130
Overdrive, Laycock-de-Normanville 625
Owen, L. W., chemical vapour deposition for plastics 1026
Owen organization, Wain-Roy 300 excavator-loader 900
Owens, A. J., on Artificial Intelligence through Simulated Evolution (book) 909
Oxford University, conference on Towards More Creative Science 4
Oxidation of sulphur dioxide, R. E. Barrett 1064
Oxide cermets, types and properties 430
Oxley, J. H., on Vapour Deposition (book) 515
Oxygen, for fuel cells for vehicle propulsion 928
liquid, nickel steel storage tank for 979
Oxygen analyser, Leco, use in vacuum degassing plate steels 983
Oxygen cutting. *See* Cutting
Oxygen steelmaking plant (trade publication) 1036
Oy Finnlines Ltd., *Finnhansa* and *Finnpartner* roll-on/roll-off ships. 1102

P

Paceco containing handling systems 926
Paceo Portainer systems container-handling equipment 725
Paceo-Vickers Ltd., formation of 725
Paceo Portainer systems container-handling equipment 725
Pacific Coast Engineering Co., formation of Paceo-Vickers Ltd. 725
Package monitors 387
Packaging Automation Ltd., FST packaging machine 943
Packaging machine, FST 943
Packaging machinery, output and order trends 438
Packed beds, fluid flow and heat transfer in 1078
Packer, case (trade publication) 1112
Packing, cooling tower (trade publication) 608
Packman Research Ltd., prototype machine for relief maps 839
Padloy Scroll-Easiflow tungsten carbide tipped drilling bits (trade publication) 130
Paint
electro, developments in 812
Ferrodor micaceous iron 456
flexible synthetic, Ramalon 861
for steelwork protection 679
silicone resin solutions 342
Paint heater and modulating controllers, Graco Vis-Con 327
Paint-mixing vessels, chemical cleaning plant for, General Descaling 466
Paint spraying machine, Phoenix 687
Paint stripper, Takstripper 9/99 905
Painting, electrophoretic, continuous in-line plant, Smiths 726
developments in 812
spray, cleaning unit, QZ 426
Painting plant, dip coating, Automatic Equipment 809
Painting shop, spray, air conditioning for BR Shildon 296
Paisley, group training centre 962
Pakistan, electric locomotives for 56
railway electrification in 56
Pakistan railways, electrification of 277
Paktank, stainless steel tube, for dissimilar liquids 551
Pall (UK) Ltd., desiccant drier filters 333
Palletised cargo handling in Finnlines roll-on/roll-off ships 1102
Palmer, G. A. Stanley, Ltd., hermetically sealed mercury relay 26
Mucon ceramic capacitors 1072
Pampero motor car, Ghia 888
Panama Canal, by R. Hammond and C. J. Lewin (book) 171
nuclear blasting proposal 510
Pandect Precision Components Ltd., trimmer potentiometer 907
Panel(s), aluminium, for floating landing mats 9
electroluminescent 42
glass heater, Pilkington 522
Panel-Track skirting board heating panels 163
Paper, and printing, DRUPA International Fair (Dusseldorf) 1078
silicone finishes 343
see also Pulp
Paper mills, Fort William. *See* Wiggins Teape
Paper tape equipment, English Electric 685
Papermaking machinery for Wiggins Teape, Fort William 497
Parachute design experiments for capsule landing on Mars 485
Paragon Pividor folding doors (trade publication) 470
Parcar Utilities Ltd., car park/shops at Yield Hall, Reading 1122
Pardee, R. E., air pollution and smokers 883
Paris Automobile Salon, exhibits at 663
Parish, D. E. Woodbine, supervisory training 139
Parker, Frederick, Ltd., mobile asphalt plant 637
Speedex 5th concrete mixer 1075
Parker, G. A., down-to-earth control 707
Parker-Hannifin (UK) Ltd., Pioneer quick-action hydraulic coupler 1139
Parkerizing (trade publication) 84
Parkin, D. W., Ltd., garage extension over Grand Union Canal 835
Parkin, John B. Associates, Toronto-Dominion Bank Tower 844
Parkinson Cowan Measurement Ltd., domestic governor for gas appliances 73
flow rate indicator (trade publication) 428
gas service governor (trade publication) 428
Parnall-701 automatic washing machine 200
Parnall (Yale) Ltd., Parnall-701 automatic washing machine 200
Parr, J. G., on Introduction to Stainless Steel (book) 335
Parsons, C. A. & Co. Ltd., Kincardine power station control system 622
meeting Britain's power needs 314
1,000 MVA transformer for Penn substation 353
Part(s) records, Telematic Rapid System film storage library for, Westinghouse 205
Particle(s), and anti-particles, symmetry principles abandoned 75
atomic and subatomic 471
Particle accelerator. *See* Accelerator
Parton, K. C., on Digital Computer (book) 863
Pase storage and handling system for use with forklift trucks 464
Passenger hoists for high aerials 832
Paterson, A., Euston main line electrification 795
Paterson Candy International Ltd., Grafham Water reservoir 154
Patrol car, Shorland 620
Pattern recognition feedback control system 898
Pattrick, M., training of industrial designers 703
Paul, Austin, Ltd., Ramalon flexible synthetic paint 861
Paul, W. H. Ltd., Panel-Track skirting board heating panels 163
Paver-finishing machine, Blaw Knox 853
Paving breaking machine, Reed International 556
Paving machine, slip-form 396, 1076
Payment-by-results schemes requirements 1083
Payne Products International Ltd., Lapmaster lapping machine 211
PCD Ltd., Oscillophot recording camera 907
Peak voltage comparison instruments, NBS 551
Pearson, Sir Denning, BEA Vanguard airline delays 94
committee to coordinate gas turbine aircraft engine policy 436
Pedigree Plus Straight Frame semi-trailer chassis 505
Peebles, Bruce & Co. Ltd., transformers for Longannet power station 1017
Peech, A. J., member of Development Coordinating Committee, BISF 177
Pegpak chokeless packaged pump for sewage and wastes 767
Pegson Ltd., Pegpak chokeless packaged pump for sewage and wastes 767
Pelican range of pumps 159
Peltier cooling elements, for surgical transplantation 966
Siemens 966
Pemberton, H. N., chairman, CEI 137
Pencil Follower data processing unit accessories 858
Pengelly, model tests on furnaces 807
Penn substation, 1,000 MVA transformer for 353
Penney, Sir William, chairman UKAEA 655
Pennsalt Ltd., centrifuges (trade publication) 256
Continuous D-Hydrator automatic pusher centrifuge 857
Stokes model 21 freeze drying equipment 551
Tempest batch basket centrifuge 31
Penny, F. D., appointed director, NEL 615
Penny and Giles Ltd., load cell/force transducers 1107
Pentex electronic telephone exchange system 1056, 1088
Pentim variable ratio percentage timer 162
Perfection Parts Ltd., Imp miniature tube-cutter 167
Imperial-Eastman range of system analyser for

refrigerating and air conditioning systems 512
oil burner control boxes 73
Uniprint Module counting and control devices 906
Uniprint Platen counting and control devices 906
Periodicals, scientific, guide to, by M. J. Fowler (book) 1145
Peristaltic pumps (trade publication) 734
Perkin-Elmer Corp., vernistat ac potentiometers (trade publication) 1036
Perkins Engines Group, analysis of craft occupations 266
Vari-feed system in hobbing machines 682
Perkins, F. H., BACIE conference 1045
Perlite, silos for storage of 1135
Perpro Greenleaf indexable milling cutter 125
Perry, P., BACIE conference 1045
Pervaporation in membrane separation processes 1115
Petbow Ltd., welding plant with brushless dc tandem generators 329
Peters, G. D., & Co. (Engineering) Ltd., Marine Defecamat sewage treatment unit 157
Petrel research rocket 458, 492
Petrofina (Great Britain) Ltd., Immingham refinery 278
Petrol engines, fuel-injection system for, AE 582
Petroleum. *See* Oil; Refinery
Petroleum cargoes: measurement and sampling, by H. Hyams (book) 129
Petroleum coke plant at Immingham refinery 278
Pfa, uses for (trade publication) 562
Phantom fighter aircraft, McDonnell, British equipment for 745
Phase gratings 911, 912
Phaselock techniques, by F. M. Gardner (book) 863
Philidas self-locking nuts, Whitehouse 406
Philips, chromatography equipment 686
colour television test equipment 533
impact mounting machine for printed circuit panels 373
iodine vapour headlamp 1010
Phillips, A. L., on Welding Handbook (book) 951
Phillips-Imperial Petroleum Ltd., opening of Billingham refinery 620
Phillips Petroleum Co., bitumen refinery, Eastham 683
Phillips, R. H., energy for new towns 838
Phillips, R. S., on Electric Lifts 1035
Philmac Oils Ltd., bitumen refinery, Eastham 683
Phoenix Bookcases, office furniture (trade publication) 470
Phoenix Telephones Ltd., paint spraying machine 687
Phosphors in electroluminescence 42
Photain Controls Ltd., photoconductive cells 375
thermal delay relay 376
Photoconductive cells, Photain 375
Photoconductor - electroluminescent applications 44
Photocopying (trade publication) 952
Photocopying machine, Thor mark-2 297
Photoelectric punched paper tape reader 208
Photoelectric receivers, miniature, Hird-Brown 990
Photogrammetry, use in tailoring 1009
Photographic emulsions used in Gemini-11 experiment, Ilford 600
Photography, high-speed, by R. F. Saxe (book) 335
stroboscopes in 134
Photometer, on Moon to measure ultraviolet light in lunar sky 1064
to determine practicability of telescopes on Moon 1065
Photopia Ltd., Super 66 portable slide viewer 833
Physics
and chemistry, handbook of, by R. C. Weast (book) 1111
for engineering technology, by A. Joseph, K. Pomeranz, J. Prince and D. Sacher (book) 255
industrial, and government sponsored laboratories, conference on 994
modern, for electrical engineers, by J. M. Kendall (book) 909
modern college, by H. E. White (book) 909
symmetry principles in 75
Picard, Henri, & Frere Ltd., Giclair-magnifier 900 417
Plansel wire- and cable-stripping pliers 1144
Supa-Nova blow torch 461
Uviscope II ultra-violet emitter and magnifier 417
Piccadilly Line. *See* London Transport Executive
Pick-up, electromagnetic, Airpax 991
Pickering Pioneer 5-ton mobile crane 168
Pickering, R. Y. & Co. Ltd., Pickering Pioneer 5-ton mobile crane 168
Pickling, Calmal processes 286
Picture monitors (trade publication) 336
Piersol, A. G., on Measurement and Analysis of Random Data (book) 171
Piezoelectric accelerometer, Bell 334
Pigments, iron oxide, BS 104
Piling rig, West's 854
Pilkington Bros. Ltd., float glass 418
glass heater panels 552
Pilkington, Sir Harry, Chancellor, Loughborough University 97
Pilot Works Ltd., hydraulic tipping gears 506
Pinchin Johnson & Associates, electro-painting development 812
Pininfarina, motor car with central steering position 665
Pinions and wheels, roller-chain, Renold 606
Pinnacles motoring centre self-service motor car repair facilities 442
Pioneer quick-action hydraulic coupler 1139
Pioneer VII satellite, launching and objectives of 352
Pipe(s)
drainage, vitrified-clay, plastic couplings for 121
insulating, Dick's 418
pressure, asbestos cement, Everite 856
sea-water circulating, Kunifer-10 158. *Correction* 511
steel, manufacture of, RTB 227
water, stainless steel 442
stainless-steel, Supatube 647
see also Tube
Pipe cleaning (trade publication) 516
Pipe connector for grain handling systems, Kongskilde 948
Pipe couplings, high-pressure, Ermeto 560
Pipe flashings, neoprene synthetic rubber, Trelleborgs 331
Pipe heating tapes, Isotape 787
Pipe weld scanner, orbital, for tube 33
Pipe welding machine, hf, Thermatool 297
Pipeline(s), low temperature problems in, Mangyshlak oilfields 787
natural gas, construction of 714
TAL, for Central Europe 834
underwater, to Isle of Wight, Southern Gas Board 155
Piping, for refinery effluent, Teflon lining for 120
gas, plastics, Chempact 947
stainless steel, for dissimilar liquids 551
Piping system (trade publication) 38
Pirelli General, cables for supergrid in disused railway tunnels 1125
Pirelli SPA, cables for Sardinia transmission line 1096
Pisani, M., handling of super tankers 398
Piston(s), water soluble core casting procedure 148
Piston data transmission, Cawston linkage system for 149
Piston head seals for rams and jacks, Dowty Seals 862
Piston ring blowby rate indicator 149
Piston ring micro-hardness tests 149
Piston ring radial force distribution 148
Piston ring temperature assessment 149
Pitney-Bowes Ltd., mailing methods (trade publication) 428
Pittuck, F. W., on Fundamentals of Motor Vehicle Technology (book) 37
Plan position indicator (PPI) 305
Plan 6 pneumatic cylinders 642
Planar turbulence amplifier, Maxam 1133
Plane structures, model analysis of, by T. M. Charlton (book) 37
Planman range of drawing hangers and racks (trade publication) 818
Plannair Ltd., air blowers for cigarette inspection machines 375
Plano-milling machines. *See* Milling machines
Planocop offset litho plate machine 298
Plansel wire and cable-stripping pliers 1144
Plant hire (trade publication) 776, 818
Plant operators' manual, by S. M. Elonka (book) 213
Plant Protection Ltd., Gramoxone W herbicide 792
Preeglone herbicide 792
Vibra-jet spray nozzle 792
Plantema, F. J., on Sandwich Construction (book) 775
Plants and water supplies 247
Plasmas in MHD power generation 105
Plassermatic 275 Universal point and crossing levelling and tamping machine 448
Plasset and Theurer, railway track maintenance machines 448
Plastic, foam, sheet, for structural models 34
Plastic balls, Allplas, for smell elimination 275
Plastic boat, moulded, Durafloat '12' 835
Plastic Coatings Ltd., Vygrips vinyl handgrips 605
Vylastic RS60 pvc 688
Plastic containers, filling, sealing and trimming automatically 943
Plastic couplings for vitrified-clay drainage pipes 121
Plastic-covered steel tubing, Spiral 1107
Plastic ducting, Celmar 851
Plastic mouldings, die casting machines and 1008
Plastic road studs, Plastix 579
Plastic roof, prefabricated, B. S. Benjamin 718
Plastic straps, Rainbow 862
Plastics
and rubbers, identification of, by K. J. Saunders (book) 691
as corrosion-resistant materials, by V. Evans (book) 1111
coating with metals, conference on 1026
electroplating of 719, 1026
fibre-reinforced 997
fire-proof 163
footwear manufacture, Dunlop 356
for motor car industry 922, 1008
glass-reinforced 996
in motor cars 626
laminated, by D. J. Duffin (book) 301
mouldable, Bagalle 1106
Bellamine 1106
reinforced, cold moulding 1062
exhibition (Earls Court) 922
exhibition of, English Electric 967
for roof mouldings EEC 967
international conference (London) 1062
matched moulding using low temperatures and pressures 1062
ship developments, Bristol-Thorneycroft 1089
spraying of 1026
trade publication 692
ultrasonic welding of 850
use in building, research on 1090
vacuum metallization of 1026
vapour deposition for 1026
see also Polyester(s)
Plastics design engineering, seminar (Cranfield) 336, 994
Plastics gas piping, Chempact 947
Plastics granulator, Homa 902
Plastics Institute, conference on coating of plastics with metals 1026
plastics design engineering seminar 336, 994
Plastics labels, Metal Label Co. 990
Plastics signs and labels, self adhesive, Webslight 989
Plastix plastic road studs 579
Plate, cold-forming large section, AEI 369
printing. *See* Printing plate
Plate rolling mill, automatic positional control for 640
Plate shears (trade publication) 38
Plate steels, vacuum degassing plant for 983
Plate testing equipment, ultrasonic, BR7, Wells-Krautkramer 556
Platform, lifting, Translift 253
Platform elevating, Snorkel 366
Plating, electro. *See* Electroplating
Platinum equipment for glass-melting furnace 325
Plenco Mining Services Ltd., Daltolac 60 and Suprasec DN rigid urethane foam insulation 370
Plenty & Son Ltd., mixing unit for molasses and water 987
Plessey Automation Group, computer-controlled traffic scheme 535
Plessey Co. Ltd., dynamic torque tracer for testing Rotenoid rotary solenoids 850
electronic vibration monitor 406
movable air surveillance radar 406
traffic control systems 525
Plessey Components Group, ignition unit for gas

central heating 25
Lectroflash electrolytic capacitors 374
Super series control solenoids 250
Plessey Dynamics Group, Hydro-stabil axle unit 558
Plessey Electronics Group, radio telephone 398
Plessey Telecommunications, Pentex electronic telephone exchange system 1056, 1088
Pliers wire and cable-stripping Plansel 1144
Plotting instrument, 1131 Variplotter 467
Plough, Lemken reversible 146
Plowshare programme on nuclear blasting 510
Plugs (trade publication) 952
Plum harvesting machine, Gould shaker 486
Plus, Paul, Ltd., Swinger portable radiogram 921
Plutonium for power production, use of (book) 515
Plutonium fuel elements for Agesta reactor 169
Plymouth, training centre 1043
Plywood, fir (trade publication) 692
Plywood Manufacturers Association, fir plywood (trade publication) 692
PMD Chemicals Ltd., high-speed gold plating 1023
Pneumatic conveyor, Berk-Gatty enclosed fluidizing system 808
Pneumatic cylinder, All-Square, Maxam Power Ltd. 205, 1133
Plan-6 642
Pneumatic equipment for use in technical colleges, Martonair 559
Pneumatic fittings in stainless steel 648
Pneumatic programmer, for turret lathe, Tecam 1133
Techne 809
Pneumatic screwdrivers (trade publication) 516
Pocket phone, unlimited range for, Pye 966
Pocketfone radiotelephone, Pye 485
Pocock, D. C. D., development in East Midlands 482
Pode, Sir Julian, member of Development Co-ordinating Committee, BISF 177
Polar Water Conditioner Ltd., magnetic scale removal unit 160
Polaris submarine, *Resolution* 534
hair-line cracks in hull 574
Polaroid Land CU-5 camera for medical and scientific use 931
Polgreen, G. R., on New Applications of Modern Magnets (book) 335
Polikon metal adhesive 25
Polishing, and burnishing machine, Osro-pol 465
in cutlery production mechanization 295
Polishing table, Ringway table 299
Pollution,
air, exhibition and symposium on 660
control measures and costs 8
in Britain, review of 571. *Letter* 883
International Congress, preview 571
report on, SCI 8
sulphur dioxide, control measures 8
Pollution control systems, exhaust, motor car, Lucas 706
Pollution problems in industry, unsolved 8
Polycarbonate capacitors, STC 689
Polyester, glass-reinforced, under long term stress 1062
reinforced, Crystic 189, for sewage effluent measuring flume 764
see also Plastics
Polyester film, Melinex 1064
Terphane 1030
Polyester resin(s), flame-retardant 1062
Polyester resin-based metal adhesives 25
Polyester sheet, foam, for structural models 35
Polyethylene pellets, aluminium tanks for 731
Polymat key-seating machines 944
Polymers, high-temperature 992
Polyolefins engineering design data, Shell, by R. A. Horsley and A. C. Morris (book) 286, 301
Polypenco Ltd., plastics (trade publication) 692
Polyphenylenes, high-temperature properties 992
Polypropylene, propathene, for reeling spools 285
Polypropylene laminated films, cartons using, adhesive for 1138
Polypropylene mouldings, Propathene, in motor cars 626
Polyscot Ltd., Unilast joint sealants 290
Polytechnic (Regent Street), industrial liaison centre 392
Polythene, electric strength of, ERA 228
Polyurethane, flexible, Flexane, for short-run mouldings 1134
Polyurethane foams, cell control agents for 340
for relief maps 839
Polyvinyl chloride extrusions for busbar insulation, Marshall 604
heavy-duty suction hose, Kanaflex 774
in building (trade publication) 952
pressure suits, United Kingdom Atomic Energy Authority 457
production from ethylene dichloride 62
Vylastic RS60 688
Polyvinyl coating materials, high-softening-point, Welvic 813
Pomeranz, K., on Physics for Engineering Technology (book) 255
Pomeroy, C. D., on Strength, Fracture and Workability of Coal (book) 775
Pomeroy, L., scholarship as memorial to 10
Pontiac GTO motor car, road test on 12
Pontiac motor cars, revisions to range 543
Poole, H. H., on Fundamentals of Display Systems (book) 335
Pooley, Henry, & Son Ltd., load cell Weighbridge 242
Pope, A., on Low-Speed Wind Tunnel Testing (book) 607
Porcelain enamel alkali resistance test 285
Port development at Tilbury 917
Port of London Authority, port development at Tilbury 917
survey on distribution of export traffic 142
Port of Manchester, shunting locomotives for, Rolls-Royce 104
Port Talbot, ore terminal for 353
Portable laser, Scientifica 292
Portable Welders Ltd., Fararc IV Mark 2 portable arc welding equipment 602
S.10 spot welding gun, hand-held 462
Portainer container handling equipment 926
Portbury ocean liner terminal scheme, White Paper on 226
Portcrete Ltd., Portsmouth Evening News building 972
Port-el-ette electric arc welding machine 467
Porto Vesme power station 1094, 1097
Portsmouth Evening News, construction of new building 972
Portsmouth Harbour Ferry Co. Ltd., ferries for Portsmouth-Gosport service 283
Portsmouth Queen, ferry with Schottel propulsion 283
Portsmouth/Southampton area, urban growth in, C. Buchanan report on 221
Portway Trio warm-air convector 351
Position indicators 386
Positional control, automatic, for plate rolling mill 640
Positioner, welding, RT 200, Interlas 426
Positor positive temperature coefficient resistors 989
Post-graduate-courses, mutual interest in 53
Postage stamps as publicity media 310
Potato harvester, Uni-digger 1053
Potentiometer
in analogue computer 693
miniature, Type 72, Davall 1029
nanovolt, Guildline 27
precision, Ferranti 1072
trade publication 1112
trimmer, Pandect 907
vernistat ac (trade publication) 1036
Potentiometer slave units, Intersonde 690
Potentiometric chart recorder, AEI 332
Potterton, Thomas, Ltd., swimming pool heating 661
Poulson, J. G. L., Associates, oil fired district heating for Highland Holiday Centre, Aviemore 922
Pountney, C. G., checking the milk bottle is clean 487
Powder(s), metal, spraying of 1026
trade publication 302
propathene homopolymer, ICI 331
Powder blending machines, Y-cone, Apex 513
Powder Couplings Ltd., friction clutch 376
Powder filling system, large bulk containers, Jumbo Transfil Model At 8 425
Powder finish on saws 851
Powder metal parts, isostatic compression of, ASEA 766
Powder metallurgy: practice and applications, by R. L. Sands and C. R. Shakespeare (book) 951
Powder recovery booth, WMS 945
Powder spraying pistol, Metallisation 901
Powell, C. F., on Vapour Deposition (book) 515
Powell & Co., drum handling equipment (trade publication) 692
Powell Duffryn Engineering Co. Ltd.
demountable trailer 147
Dinosaur system, containerized waste materials handling equipment 506
Dumpmaster system containerized waste materials handling equipment 506
Dumpster system, containerized waste materials handling equipment 506
Hunslet East oil rail terminal 1009
Powell Duffryn Group, oil fired district heating for Highland Holiday Centre, Aviemore 922
Powell, E., electric motor car 744
Powell, J. R., magnetic levitation for railway trains 1123
Powell, W. J., 'satellite' computer centre 150
Power, geothermal, prospects of greater use 285
see also Electric power; Electrical power; Electricity
Power capacitors, application of (book) 171
Power controllers, Twinstat 729
Power-Draw wiredrawing machines, Automation Ltd. 514
Power-Gas Corp. Ltd., Immingham refinery 278
Power Lifts Ltd., lifting machines 1034
Power losses due to lubricant friction 632
Power measurement, propeller shaft, in fishing vessels 639
Power packs, hydraulic, Fairey 557
Hy-Pro GP 689
Power plant, noise from, symposium on, IME 172
Power production, thermal efficiency and, by K. Fenton (book) 171
use of plutonium for (book) 515
Power 70 switchboard 251
Power station(s)
Aberthaw A 367
Aberthaw B, construction progress 367
equipment for 231
generating sets for 368
Blyth B., noise from cooling water pump motors at 640
Carolina Port B 1015, 1018
coal supply to, Merry-go-round railway trains for 415
Cockenzie 1015
boiler drum failure under proving water test 1018
Cottam, TACE systems for 634
Didcot 237, 240
Drax 1084
coal supply for 415
generating plant 236
Eggborough, coal supply for 415
Fawley 239
Ferrybridge C 237, 238
coal supply for 415
cooling tower failure 351, 399
Hammersmith, description and closure of 1092
Hams Hall, boiler cradles 724
hydroelectric. *See* Hydroelectric
Kincardine, automatic control scheme 1015
semi-automatic control system 622
Kingsnorth, insulating pipes, Dick's 418
Longannet. *See* Longannet power station
merry-go-round trains for 237
natural gas for 714
position and prospects of 108. *Letter* 272
nuclear. *See* Nuclear power station
planned and under construction 235
Porto Vesme 1094, 1097
Scotland, development position and prospects 1015
tidal, La Rance. *See* La Rance
Tufts Cove, roof insulation 246
West Thurrock, thermal efficiency 236
transformer transport to 239
Power station construction programme 667, 791
Power station design, construction and commissioning procedure 240
Power station generating capacities, CEGB 235. *Letters* 314, 487
Power supplies, and voltage regulators (trade publication) 382
for 1970, E. S. Booth 791
modular, Gresham Lion 26
monitoring, frequency meters for, Dawe 292

Power supply units, high-voltage, Elliott 605
stabilized, Brandenburg 374
Power systems, analysis service for, AEI 169
Power tools (trade publication) 256
Power transmission
ac and dc compared 16
Churchill Falls hydroelectric power station plans 747
dc, conference on (Manchester) 549
high-voltage dc, conference on, IEE 172, 583
in Canada 583
in Russia 583
survey of projects 546
valve developments for 548
765 kV proposal 16
1,100 kV proposal 16
stability in, CIGRÉ conference 16
see also Drive; Transmission
Power transmission lines, bare-hand live-line maintenance techniques 1060
dc, Italy-Sardinia 1094
Kingsnorth-Willesden 546, 583, 1098
dual voltage 1061
400 kV supergrid in disused railway tunnels 1124
James Bay-Toronto, repair techniques 1060
Stella-Cockenzie 351
tension insulator, method of changing 1061
underground, cost in UK and US 1121
Power transmission systems, CIGRÉ conference on 16
Power unit, auxiliary, Saurer 404
Powerbeam straddle carriers for container handling 209
PowerGrip standard pulley drive 905
Powermatic Ltd., packaged air heaters (trade publication) 1146
Powerstor storage and handling system for use with forklift trucks 464
Pozdeyev, A. A., on Deformation of Metals During Rolling (book) 909
Precipitators, electrostatic, gear units for, Varatio 374
hot-pass, Svenska Flaktfabriken 498
Precision Rubbers Ltd., silicone rubber products (trade publication) 864
Preece, Cardew & Rider, dc power transmission line to Sardinia 1098
Preeglone herbicide, Plant Protection 792
Prefabricated plastic roof, B. S. Benjamin 718
Preflex beams, Boulton and Paul 578
Premier Stampings Ltd., sound absorbing blocks 682
Presentation of data, symposium on (Middlesbrough) 1146
Press(es)
cold extrusion, multi-stage transfer 870
extrusion, Hypactor, for Magnox nuclear fuel cans 523
laboratory 767
400 ton, for flanging, edging and bending 33
hydraulic, for cold-forming large section plate 369
Quintus 5,000 ton, ASEA 765
power, for motor industry, US Industries Inc. 882
soil consolidation, error reduction in 164
strip feed for, Festo-Pneumatic 464
Press Automation Systems Inc., acquired by US Industries Inc. 882
Press brake, hydraulic, Massey-Pinchart-Deny 420
Press feeds (trade publication) 84
Press & Shear Machinery Co. Ltd., plate shears (trade publication) 38
Pressing, cold, cermets 431
hot, cermets 431
Pressure booster, water, Megator 1033
Pressure control, Mercoid 731
Pressure control unit, combined, Normalair 406
Pressure gauge, differential, Lines 947
Pressure measurement, by strain gauge 737
differential, Fischer and Porter 417
Pressure/resistance analogue transducers 1107
Pressure suits, thermal conditions in, 457
Pressure switch, Coutant Electronics Ltd. 162
Pressure transducers, CIC range 71
medical, S.E. Laboratories 690
Pressure vessel(s), British Standard requirements. *Letter* 272
Dungeness B nuclear power station 64
Pressure vessel technology committee of enquiry, BSI 1044
Pressure waves, nonlinear, in gases, by R. Sauer (book) 1035
Preston, B. N., chairman of BMEC 268
Preston, R., flame-retardant polyester resins 1062
Prestressed bridges, tests, Lehigh University 417
Prestressed concrete. *See* Concrete
Prestressing, Monostrand (trade publication) 864
PRFCS. *See* Pattern recognition feedback control system
Prices and Incomes Bill, Part IV 613
Prices and Incomes Board, first general report 391
productivity agreements and payment-by-results schemes requirements 1083
Prices and incomes policy, opposition to 47
Prices policy, dispute over laundries 739
Priestley, B., on British qualifications 178
Priestman Bros. Ltd., hydraulic excavator 638
Primaclamp for use on drilling machines (trade publication) 1078
Primatools Ltd., drilling clamp (trade publication) 1078
Primer, epoxy (trade publication) 818
Primer Logikit for teaching numerical control techniques 459
Primrose Third Axle Co. Ltd., exhibits at Commercial Motor Show 580
Prince, J., on Physics for Engineering Technology (book) 255
Princess Victoria car-ferry, sinking of 484
Principles of communications engineering, by J. M. Wozencraft (book) 36
Principles of desalination, by K. S. Spiegler (book) 469
Principles of radiation protection engineering by T. Jaeger (book) 255
Principles of structural metallurgy, by B. Harocopos (book) 993
Print-out counter (trade publication) 818
Printed circuit boards, edge connectors for, Aircraft-Marine 290
Ferranti 604
Printed circuit panels, Philips Impact mounting machine for 373
Printing, and paper, DRUPA International Fair (Dusseldorf) 1078
dynamic metrology in, G. Doye 599
Printing balancing tabulator, ICT 1075
Printing, Packaging and Allied Trades Research Association, Dynamic Metrology, G. Doye 599
Printing plate machine, Planocop offset litho 298
Printing technology, advances in, conference on 1078
Private automatic telephone exchanges (trade publication) 650
Procedures manuals, inadequacy of, J. D. Vandenberg 221
Process control by fluidic devices 566
Process operator training, British Geon 102
Prodorite Ltd., Celmar plastic ducting 851
Product Planning Ltd., cost effectiveness in research survey 348
Production engineering department, Birmingham University 179
Production Engineering Research Association
annual general meeting 2
courses in low-cost automation 568
heat treatment of cold extrusion punches 682
metal forming techniques and equipment 84
report on activities 2
symposium on programming for industry 994
Production processes, numerical control of, symposium on 516
Production Sales & Service Ltd., gas/air torch 467
Production technology for English students, experiments in, by R. Winrow (book) 1145
Production Tool Alloy Co., Holman Rotair compressor 574
Perpro Greenleaf indexable milling cutter 125
Productivity, and efficiency advisory services inquiry 1083
and technical change, by W. E. G. Salter (book) 1077
engineering (Vol. 2), by W. F. Walker (book) 83
Productivity agreements 391
and payment-by-results schemes requirements 1083
Productivity conference, national 613
Professional isolation, danger of 434
Professional men: the rise of the professional classes in nineteenth-century England, by W. J. Reader (book) 469
Proficorder profile recorder, Bendix Corp. 78
Profile of East Germany, L. Hornsbey 469 *Letter* 574
Profile analyser, AEI 175
Profile recorder, Proficorder, Bendix Corp. 78
Profit by design, congress on (ColD) 703
Profiting by quality and reliability, conference on (Blackpool) 877
Proffitt, R., town gas for forge heating 771
Programma 101 computer 532
Programmer, pneumatic, Tecam, for turret lathe 1133
Techne 809
Programming for industry, symposium (PERA) 994
Progressive Building Design Ltd., versatile bungalow at Welwyn 789
Project, new journal for schools 1
Projector, Elmo DM-16 533
light, Hird-Brown 1107
Super-8 zoom 533
Propane-driven booster for battery driven vehicles 930
Propane fired heating system 296
Propane tank, trailer-mounted, British Oxygen 857
Propathene homopolymer powders, ICI 331
Propathene polypropylene for reeling spools 285
Propathene polypropylene mouldings in motor cars 626
Propellants, high explosives and, by S. Fordham (book) 817
Propeller
cast iron, austenitic spheroidal graphite 158
contra-rotating, in ships 354
metal-stitching of, for liner *Queen Mary* 312
ships' (trade publication) 952
Voith Schneider bow, for *Aberthaw Fisher* shallow-draught vessel 231
Propeller shaft power measurement in fishing vessels 639
Propeller shaft tunnel of ship, accident in 835
Proplan. *See* Product Planning Ltd.
Proportional counters 384
Propulsion units, Schottel, in ferries *Gosport Queen* and *Portsmouth Queen* 283
Protection of steelwork, discussion on papers 679
Protection system, machine operator, Proximitor Guard 986
Protective relays application guide (book) 171
Protimeter controller for grain drying plant 1052
Proton synchrotron. *See* Synchrotron
Proximitor Guard machine operator protection system 986
Proximity detector, traffic light control by 276
Prudential Line 'Lash' system of container barges 925
P.S.C. Equipment Ltd., bridge bearings (trade publication) 428
Monostrand prestressing (trade publication) 864
Tetron PTFE bridge bearings 717
Ptfe for piston rings for compressor 419
Ptfe bridge bearings, Tetron 717
Public Building and Works, Ministry of, conference on energy for new towns 395
Public Works and Municipal Services Congress and Exhibition (Olympia), exhibits at 853, 946
Pugsley, A. G., on Safety of Structures (book) 909
Pulp, bleaching of, Wiggins Teape 810
see also Paper
Pulp mills, Fort William. *See* Wiggins Teape
Pulping process, Stora two-stage 496
Pulse arc welding. *See* Welding
Pulverized fuel ash, grouting with, British Railways 170
trade publication 336
Pump(s)
automatic priming (trade publication) 1146
axial piston, Denison 559
centrifugal and other rotodynamic, by H. Addison (book) 129
chokeless packaged, for sewage and wastes, Pegpak 767
concrete, lorry-mounted, Squeez-Crete 638
Schwing ABP30 686
container, for aggressive liquids, British Central Electric 374
direct-coupled 4-in, Girdlestone 1143
fuel-oil transfer 1012
glandless diaphragm, Girdlestone 948
Harland Fibro-glide 496
heat. *See* Heat pump
heavy duty, Evers 290
high-volume, Haskel low-pressure 559
hydraulic, piston, Orbital 404
vibration in, IME 130
hydraulic hand, Mini-Pak 906

induced-flow, Spate 724
trade publication 608
metering, Metripump 125
motorized, Jabsco 292
new, Commercial Hydraulics 560
oil, portable soluble, JBM 375
trade publication 214
order position and prospects 1086
output and order trends 438
Pelican range of 159
peristaltic (trade publication) 734
rotary gear, Duomac 126
screw, Landustrie 991
self-priming, Spitfire-70 906
sludge, portable, UVC4 Univac 468
submersible, Flygt 212
trade publication 302, 692, 910
vacuum, oil-free Gast 25
Pump bilge, reciprocating 1012
submersible 1012
Pump motor, cooling water, noise from 640
Pump mounting, hydraulic, Lister 854
Pumped storage plant, Cruachan, shear pins failure 1018
Pumping plant, steam, Severn Tunnel. *Letter* 1051
Pumping stations, Grafham Water reservoir 154
Punch(es), cold extrusion, heat treatment of, PERA 682
Punched paper tape reader, photo-electric 208
Purox alumina tubes 991
P. and V. (Mining and Engineering) Ltd., drilling bits and accessories (trade publication) 130
Pye Telecommunications Ltd., Compact radio-telephones 485
Pocketfone radiotelephones 485
unlimited range for pocket phone 966
Pye TVT Ltd., picture monitors (trade publication) 336
television broadcasting equipment (trade publication) 382
television picture monitors (trade publication) 470
Pyramids, X-ray examination of 128
Pyrene Co. Ltd., parkerizing (trade publication) 84
Pyroclor-filled transformers (trade publication) 1146
Pyroclor fluid for transformers 1088
Pyrometer, electronic, Millivac 1138
for steam car 704
for tyre temperature measurement 74

Q

Q4 liner, Cunard, automation in 11
Quad edge connectors 290
Qualcast Group, activities in Derby 350
Quality, on-line measurement and inspection and their impact on, conference 84
Quality and reliability, profiting by, conference on (Blackpool) 877
Quality and Reliability Year 836, 877
inauguration 741
Rank Taylor Hobson 1051
Quality control methods, English Electric 836
Quantovac, use in vacuum degassing plate steels 983
Quarantine by irradiation 28
Quartz iodine motor vehicle lighting 532
Queen Mary, liner, metal-stitching of propellers for 312
Queen's College, Dundee, automatic harmonic analyser 803
Queueing theory, applied, by A. M. Lee (book) 171
Quickfit and Quartz Ltd., peristaltic pumps (trade publication) 734
Quinton-Crane Electronics, electronic machine tool feed drive system 31
Quintus 5,000 ton hydraulic press, ASEA 765

R

Rabone Chesterman Ltd., dial caliper 253
Racing motorists' protection, Nomex nylon overalls for 274
Rack(s), drawing (trade publication) 818
Rack construction system, Lektrokit (trade publication) 470
Radar
Decca 101, for small boats 1088
Decca True-Motion 1011
marine, transistorized, Kelvin Hughes 32
movable air surveillance, Plessey 406
range and direction finding by 305
Radar Pneumatics blowing system 496
Radcliffe, J. W., two-level roadway Gateshead 311
Radial gratings 913
Radiation, nuclear, units for India 55
Radiation Central Heating Ltd., ignition unit for gas central heating 25
Radiation detector(s) 384
Radiation detector output signals 385
Radiation protection engineering, principles of, by T. Jaeger (book) 255
Radiation shielding windows (trade publication) 1146
Radiatron batch counter 1072
Radio, and recording equipment, Bang & Olufsen 395
stereophonic broadcasting, BBC 193, 230
underground, for collieries 575
Radio beam, range and direction finding by 304
Radio Corp. of America, Lunar Orbiter spacecraft 1128
Radio mast, 60 ft inflatable tube 535
Radio propagation, MF, LF and VLF, conference on 172
Radio Show (Earls Court), exhibits at 395
Radio systems, frequency generating and control for, conference on 1078
Radio telephone. *See* Telephone
Radioactive Dating and Methods of Low-Level Counting (Vienna), Symposium on 608
Radiochemical manual, by B. J. Wilson (book) 427
Radiogram, portable, Swinger 921
Radioisotope(s) used in industrial instruments 390
Radioisotope instruments
advantages of 383
applications 386
basic physics of 383
definition of 383
disadvantages of 383
Engineering Outline 383
legal obligations 389
principles of operation 385
safety precautions 389
Radioisotope production, manual of (book) 1077
Radome of Concorde supersonic airliner, epoxy moulding for 897
Rafique, S. O., bearing performance 852
Rail(s), wheelburns on, effects of 1099
Rail tank cars, thermographic examination of foam insulation 128
Railing, guard (trade publication) 910
Railroad, New York Central, ultra high speed operation research 326
Railway(s)
British. *See* British Railways
commercial, private-enterprise, Dart Valley 1049
Jane's world, 1965–66, by H. Sampson (book) 381
Japanese National, Tokyo-Osaka high-speed link 486
London and North Eastern, by C. J. Allen (book) 951
Pakistan, electrification of 277
ultra high speed operation research 326
underground, rapid transit system, Montreal Metro 889
see also London Transport Executive
Railway accident. *See* Accident
Railway career, reflections on, by J. M. Dunn (book) 733
Railway disasters, historic, by O. S. Nock (book) 1111
Railway electrification 658
in Pakistan 56
in 20th Century 793
trade publication 734
Railway history, British, bibliography of, by G. Ottley (book) 561
Railway locomotive. *See* Locomotive
Railway rolling stock, for Glasgow electrification scheme 896
for Montreal Metro 890
Victoria Line 800
seealso Locomotive; Wagon
Railway signalling, high cost of 795
in Euston main line electrification 793
Railway track condition recording and maintenance system, Neptune 190
Railway track lining and consolidating machine, AL203 448
Railway track maintenance machines 448
Railway trains
diesel multiple-unit, fires in 970
magnetic levitation for 1123
merry-go-round, for coal supply to power stations 415
for power stations 237
ultrasonic beam switch for 763
Railway vehicle testing station (Vienna) 104
Rainbow, S. H., Ltd., plastic straps 862
Rallye Kadett motor car, Opel 665
Ramalon flexible synthetic paint 861
Ramen Lamella heat exchanger 729
Ramsden, C. D., container handling 926
Ramsomes, Sims & Jeffries, Multivac grain drier 147
Ranby, P. W., electroluminescence 46
Rance estuary, tidal power station 17
Randall, J. H. & Son, Ltd., handling and storage equipment (trade publication) 1146
Random data, measurement and analysis of, by J. S. Bendat and A. G. Piersol (book) 171
Range finding, Engineering Outline 303
Rank Organisation, Talystep thin-film thickness measuring instrument 808
Varotal zoom lenses 533
Rank Taylor Hobson, Quality and Reliability Year campaign 1051
Rank Xerox Ltd., photocopying (trade publication) 952
xeroduplicator copying machines 685
Rapid Magnetic Ltd., magnetic concentrator for iron ore 644
Rapid transit railway system, Montreal Metro 889
Rapide bale-handling elevator 147
Rapsodie fast reactor 1150
Ratcliffe, J. A., Euston main line electrification conference 793
Ratter, J., Euston main line electrification 795
Raven, F. H., on Mathematics of Engineering Systems (book) 691
Raychem Ltd., Thermofit insulated solder sleeves 1072
Raymond, S., on Surveying (book) 37
Raymond, S. E., Euston main line electrification conference 793
RCA Colour Tubes Ltd., cathode ray tubes for colour television 273
RCM (Air Distribution) Ltd., Rhomboidal air controller air conditioning systems 289
RDA-MC metal-clad diamond abrasive 286
Reactor project, Dragon high temperature, OECD 371
Reader, card, Lectromatic 375
photo-electric punched paper tape 208
Reader, W. J., on Professional men: the Rise of the Professional Classes in Nineteenth-Century England (book) 469
Readhead, John, & Sons, Ltd., centenary 427
Reading, Yield Hall, car park and shopping area 1122
Reading machine, document, ICT Universal Document Transport 328
Reading University, Stokes model 21 freeze drying equipment 551
Reads Ltd., skills analysis training on can-making equipment 182
Rebel series motor car 664
Receiver(s), miniature photoelectric, Hird-Brown 990
telecommand, GEC 405
voice, TR-109 417
Recent advances in optimization techniques, by A. Lavi and T. P. Vogl (book) 427
Recon (Pipelines) Ltd., Kanaflex pvc heavy-duty suction hose 774
Recorder, chart, potentiometric, AEI 332
Recording equipment, radio and, Bang & Olufsen 395
Rectifier(s)
controlled, position and prospects 722
in Euston main line electrification 794
pressure-assembled 722
semiconductor, for high-voltage dc power transmission 583
silicon, replacements for valves, International Rectifier 334
thyristor silicon controlled 163
Rectifier technology, silicon and germanium, by

R. Wells (book) 649
Reddaway, W. B., on Productivity and Technical Change (book) 1077
Redford, G. D. on Mechanical Engineering Design: An Introduction (book) 129
Redhead, J. & Sons Ltd., container ships 441
Redifon Ltd., Main Station/SSB transmitter 158
Redshaw foil gauge 738
Reducing valve, Midland Industries Ltd. 73
trade publication 470
Reed International Inc., paving breaking machine 556
Reed & Mallik Ltd., Clywedog Dam 755
Wiggins Teape paper mills, Fort William 495
Reeling spools, propathene polypropylene for 285
Re-entry research, hypervelocity gas-gun for 508
Rees, M. W. T., Euston main line electrification 794
Refinery
at Immingham, Continental 278
Billingham, opening of 620
bitumen, Eastham 683
tanks for 683
Kingsnorth, insulating pipes, Dick's 418
Refinery effluent, Teflon lining for piping for 120
Reflection(s) on a railway career, by J. M. Dunn (book) 733
Reflection gratings 913
Refractory materials with diamond cutters, milling of 603
Refractory metals and alloys III: applied aspects, by R. I. Jaffee (book) 733
Refrigerated containers, Voorwarts 942
Refrigerated motor vehicles, Warner SF400 electro-sheave clutch for 897–898
Refrigerating machinery, output and order trends 438
Refrigerating machinery industry, position and prospects 1086
Refrigerating system analyser 512
Refrigerating unit, Selcom 941
Refrigeration equipment in cargo ships 1014
Refrigeration plant, Manchester abattoir 69
Refrigeration system, liquid carbon dioxide, York 507
Refrigeration unit, York 986
Refrigerator, and dispenser vending machine, coinless, Bell Captain 880
cryogenic applications 520
medical, portable, De La Rue Frigistor 458
Refrigerator/trawler ship, Burmeister and Wain 882
Refuse incinerator for Derby 750
Regency Braemar caravan 971
Regenerators, model tests on 807
Regina Foundry Co., bandsawing machine 945
Rehabilitation Centre, Medical 658
Reheating furnace, control system for 325
Reichert micro-hardness testing machine 149
Reid, W. T., sulphates in boiler furnaces 1064
Reinitzhuber, F., temporary bridges 678
Rekord. *See* Opel
Relay(s)
coin lock-out, for vending machines, Keyswitch 906
hermetically sealed mercury 26
mercury, wetted, B and R Relays 375
miniature, Keyswitch 604
multiple reed 72
thermal delay, Photain 376
Relay application guide, protective (book) 171
Relay coils, Hamlin DRG2 71
Relay switching techniques, handbook of, by J. Th. Appels and B. H. Geels (book) 607
Relay/transformer units, John Davis 643
Release agent(s) 340
silicone, Adsil-Two 331
for shell mouldings 70
Reliance Telephone Co. Ltd., flameproof loudspeaker equipment 987
PABX4 telephone exchange with visual display 921
private automatic telephone exchanges (trade publication) 650
Reliant Scimitar motor car 753
Relief maps, new technique for 839
Remington Rand Ltd., copying machines 597
Remploy, annual report 916
21st year 916
Renault Ltd., exhibits at Commercial Motor Show 580
exhibits at Paris Automobile Salon 664
Renault-16 motor car, description and road test on 323
Rendel Palmer & Tritton, ore terminal at Port Talbot 354
Renold Chains Ltd., roller-chain pinions and wheels 606
Rentokil Laboratories Ltd., cavity wall insulation with rockwool 1140
weed control (trade publication) 734
Repeaters for undersea telephone cable 76
Report writing, business, by E. Sidney (book) 255
Republic Electronics Corp., Mucon ceramic capacitors 1072
Research, and development, communicating the results of, symposium on 84, 614
use of qualified scientists and engineers 964
basic, position and prospects 740
in electric power, by P. Sporn (book) 775
Research and Development Society, symposium on communicating the Results of Research and Development 84, 614
Research effectiveness in firms 348
Research guide, Scandinavian (book) 129
Reservoir, Diddington. *See* Grafham Water reservoir
for regulating flow of River Severn 755
Grafham Water, constructional details 151
Letters 314, 355
Reservoir water evaporation control 326
Reshaping London's bus services, booklet 528
Resins
high-temperature 992
moulding with (trade publication) 1078
polyester, flame-retardant 1062
silicone 337
insulating 341
Resistance measurements by strain gauge 736
Resistojet satellite spin control and orbital manoeuvring device 1118
Resistors
cermet 432
glass-tin-oxide, Electrosil Ltd. 27
metal oxide film 161
positive temperature coefficient, Positor 989
solid carbon, Erie 250
trade publication 864
Resolution, Polaris submarine 534
hair-line cracks in hull 574
Resolved components indicator, Solartron 803
Resonant gate transistor with built-in tuning fork 732
Reutlinger portable dynamic balancing device 211
Reverse osmosis in desalination plant 550
in membrane separation processes 1114
Reverse Ultipor pre-filter, desiccant drier filters 333
Rex Chainbelt Incorporated, Rex Side Bow roller chain 424
Rex Side Bow roller chain 424
Reynolds, J., BACIE conference 1045
Reynolds, O., science of applied mechanics 407
Reynolds Tube Co. Ltd., steel tubing (trade publication) 214
Reznor Nesbitt Ltd., four-channel controller 70
Rheology and soil mechanics, by J. Kravtchenko and P. M. Sirieys (book) 909
Rhomboidal air controller air conditioning systems 289
Rhymney Engineering Co. Ltd., ultrasonic beam switch for merry-go-round railway trains 763
Richard Thomas & Baldwins Ltd., automation of reheating furnaces 325
Lee Wilson open-coil annealing plant 1108
steel pipe manufacture 227
Supervit steel sheet 1108
Richards, L. A., President, Association of Engineering Distributors 830
Richardsons Westgarth, data logging system for ships 981
Richeson, A. W., on English Land Measuring to 1800: Instruments and Practices (book) 993
Rickards, J. K., honorary secretary, Engineer's Guild 394
Rickman-Metisse, motor cycle 923
Ricrosene 7 water treatment to raise pH 1071
Rigid urethane foam insulation, Daltolac 60 and Suprasec DN 370
Rilsan Nylon-11, glass-filled 163
Ringway table polishing table 299
Rippon, J. S., Information Scientists' conference 140
River Severn, reservoir for regulating flow of 755
River St. Lawrence, Trois-Rivieres Bridge over 1100
River Wye, Greyfriars Bridge over 360
River Yenisei, lock system on, wheeled steel basin as alternative to 787
RM Trailers Ltd., cable drum transporter 1075
Road(s)
A40, concrete for Western Avenue extension of 576
and land measuring machines, Trumeter 579
in England, MOT report 1084
spray hazards on 352
two-level, Gateshead 311
see also Bypass; Highway; Motorway; Underpass
Road accident. *See* Accident
Road construction, cost trends study 7
efficiency in, Lofthouse report on 6
regional units 960
Road construction contracts, tendering for 7
Road construction programme 1084
Road Federation Conference, International (London) 578
Road-Marshall series H road roller 855
Road materials (trade publication) 952
Road paving unit, slip form 396, 1076
Road Research Laboratory, bridge vibration (report) 787
spray hazard on roads 352
traffic forecasts. *Letter* 1006
vehicle collisions with roadside equipment 745
Road roller, Clark Sheid rubber-wheeled 856
Road-Marshall series H 855
trade publication 172
Road safety, White Paper on government policy 226
Road studs, plastic, Plastix 579
Road surfaces, Mighty Mite white-line erasing unit for 602
Road traffic. *See* Traffic
Road and Traffic Networks Engineering Exhibition, International (Imperial College) 578
Roadside equipment, vehicle collisions with, Road Research Laboratory 745
Roballo Engineering Co. Ltd., rotatable cable and hose connector 424
Robb, F. F., energy for new towns 838
Robb, Henry, Ltd., helicopter operations training ship *Engadine* 534
Robens, Lord, NCB annual report 528
Roberts, C. M., award by Institution of Civil Engineers 434
Roberts Instruments, Weatherstation meteorological kit 1051
Roberts, J. E., new structural steels 676
Roberts, J. M., structural steel 680
Robertson, A. S., Euston main line electrification 794
Robertson, H. H. (UK) Ltd., roof cladding (trade publication) 608, 1036
suspended staging 254
Robertson, W. H. A. & Co. Ltd., wiredrawing machine 252
Robertson, W. S., on Technical Writing and Presentation (book) 863
Robinson, T., meeting Britain's power needs 314
Robomatic grain driers, John Wilder 1053
Rock(s), Upper Carboniferous, symposium on 214
Rock crusher, jaw-type, Kue-Ken 642
Rock drill, lightweight, Holman 945
Rock Mechanics Symposium (Minnesota) 130
Rock sorting machine, optical 82
Rocket, Petrel, Bristol Aerojet 492
Petrel research 458
Rocket fuel, hydrogen as 518
Rocket-propelled belt, Bell Rocket Belt 143
Rocket reactor, NRX-A5 128
Rockweld Ltd., Listomac welding plant 856
Magna welding unit 856
Rockwell Machine Tool Co. Ltd., Matrix No. 50 jig-boring machine 725
Rockwool, cavity wall insulation with 1140
Rocol Ltd., ASP for coal cutting machine maintenance 682
lubricants (trade publication) 692
Rod seals for rams and jacks, Dowty Seals 862
Rodding machine, GPO 1133
Roersg Aviation, Cessna 1967 model 150 aircraft 353
Rogan, A. J., container ships 441, 924
Roll contour control system, Fukuyama steelworks 490
Roll forming machines, Grigg 1075
Roll grinding machines, Waldrich-Siegen 123
Roll-on/roll-off facilities for Hull docks 227
Roll-on/roll-off ship, *Finnhansa* 1102

Finnpartner 1102
for container carriage 925, 926
Roller, road. *See* Road roller
Roller chain, Rex Side Bow 424
Roller-chain pinions and wheels, Renold 606
Roller levellers (trade publication) 256
Roller ratchet drive for synchronous motors, Ferraris 462
Rolling, metals during, deformation of, by I. Ya. Tarnovskii, A. A. Pozdeyev and V. B. Lyashkov (book) 909
Rolling mills, by A. I. Tselikov and V. V. Smirnov (book) 951
Fukuyama steelworks 489
output and order trends 438
plate, automatic positional control for 640
Rolling stock. *See* Railway rolling stock; Locomotive; Wagon
Rollo-Hardy & Co. Ltd., welding technique, stainless steel 369
Rollo NV, MAN diesel engines 941
Rolls-Royce Ltd.
acquisition of Bristol Siddeley Engines 436
activities in Derby 349
Adour RB172/T260 supersonic turbofan aircraft engine 491
appointments to board 828
BEA Vanguard airliner delays 94
C4NFLM compression ignition engine 160. *Correction* 375
computer program for turbine blade temperature 1070
Eagle diesel engines 102
Esso Lubrication Service 635
fires in diesel multiple-unit railway trains 970
gas-turbine(s) for multiple-unit passenger trains 828
gas-turbine aircraft engine position and prospects 106
modifications to braking systems of motor cars 968
railway track maintenance machines 448
RB 153 gas-turbine engine 107
RB 162 lift jets 107
RB 172/T 260 turbofan engine 107
RB178 turbofan aircraft engine 106, 540, 961
RB 193 gas-turbine engine 107
RT 172 gas-turbine engine 107
shunting locomotives for Port of Manchester 104
Spey engine for Corsair II aircraft 227
Spey 506 turbofan engine 107
Trent turbofan aircraft engine 491
Ronan, C. A., on Ages of Science (book) 691
Roof, plastic, prefabricated, B. S. Benjamin 718
timber shell (trade publication) 818
Roof cladding (trade publication) 608, 1036
Roof mouldings, reinforced plastic for, EEC 967
Roof support, hydraulically powered colliery 209
Roof trusses (trade publication) 172
Roofing, Cellactite protected steel sheeting for 599
Rooflight (trade publication) 776
Rootes Group, automatic die casting machines 1008
exhibits at Motor Show 754
Hillman Hunter motor car 625
Sunbeam Imp motor car 629
Rope(s), for cable-stayed bridges 678
from man-made fibres, by A. W. Smith 355
wire. *See* Wire rope
Roper, H., energy for new towns 838
Ropp, R. D., Utility Kart battery vehicle 54
Rosemount Engineering Co. Ltd., platinum resistance thermometers 774
Ross, R. A., on Society of American Value Engineers Convention (book) 607
Ross, S. Grahame, Ltd., Vosper electro-hydraulic steering gear 158
Rotair compressor, Holman 574
Rotary feed table, Enots 907
Rotary Pumps Ltd., Gast oil-free vacuum pumps 25
Rotary table, tilting and dividing, Euco 687
Rotary transfer machine, TS 500, Steinel 602
Rotating head for vessel internal cleaning, Spray-O-Mat 813
Rotenoid rotary solenoids, dynamic torque tracer for testing 850
Roto-Finish Ltd., electroplating of plastics 719
Osro-pol polishing and burnishing machine 465
Rotor, ultra-centrifuge, temperature measurement of 763
Rotork Engineering Co. Ltd., EH1 valve control unit 552
Rotork Marine Ltd., Sea Truck motor boat 189
Rottenburg, P. A., Advances in Materials (book) 83
Roughness. *See* Surface roughness
Round Oak Steel Works Ltd., change to metric system 230
Rover 2000 motor car 802
Rover Co. Ltd., acquisition by Leyland Motor Corp., 1042
Rover Wolston TP90 turboprop aircraft engine 491
Rowe, power transfer 411
Rowe, C. H., air terminals 355
Rowe, N. E., from university to industry 707. *Letter* 746
Rowe, P. N., fluidization research 204
Rowlatts Hill district heating scheme 748
Rowley, D. S., milling with diamond cutters 603
Rowntree, D., on Basically Branching (book) 515
Royal Aeronautical Society, Centenary Congress (London) 540
conference on stress analysis 1078
Daniel and Florence Guggenheim Lecture, M. B. Morgan 540
Royal Agricultural Society of England, Royal Show (Stoneleigh) 146
Royal Air Force, engineer training at Trenchard Hall, Cranwell 618
Victor B Mk. 2 strategic reconnaissance aircraft 63
Royal Aircraft Establishment, noise research 961
rubbers at high temperature 28
UK-3 satellite 1008
Royal Commission on Local Government 615
Royal Commission on Trade Unions 827
Royal Institute of British Architects, Christmas Lectures 1036
Royal Institute of Chartered Surveyors, Christmas lectures 1036
Royal Institution, Christmas Lectures 1036
Royal Institution of Naval Architects, member of Council of Engineering Institutions 137
Royal Navy Scientific Service, modulation scanning technique 805
Royal Show, agricultural machinery exhibits 146
Royal Smithfield Show (Earls Court), exhibits at 1052
Royal Swedish Academy of Engineering Sciences, underwater oil and gas reserves, M. E. Spaght 584–93
Roylance, T. F., on Engineering Design (book) 427
Royston Instruments Ltd., Midas aircraft integrated data recording system 404
Rubber(s)
and plastics, identification of, by K. J. Saunders (book) 691
at high temperature, RAE 28
butyl, 'pillow' tank for storing liquids 982
tank lining 1138
neoprene synthetic, pipe flashings, Trelleborgs 331
nitrile (trade publication) 864
silicone 337
Dow Corning 1106
multi-purpose, Silastoseal B 511
properties 341
Silcoset 248
uses 340, 341
urethane (trade publication) 994
Rubber industry, inter-firm comparison 1118
Rubber Industry Economic Development Committee, activities of 1118
Rubber and Plastics Research Association, research programme 1090
Rubber products, silicone (trade publication) 864
Rubber tyres for Montreal Metro 889
Rubert & Co. Ltd., roughness comparison specimen specifications 175
Rudge, H. E. & Co. Ltd., interlocking gas cock 947
Rule, arc-drawing, Arc Rule 421
Rumney Engineering & Welding Co. Ltd., Hancoline HL2B oxygen cutting machine 939
Runge, Sir Peter, member of Development Co-ordinating Committee, BISF 177
Runway, airfield, sampling with core drill 1135
Runway extension over water, La Guardia Airport 881
Rush hour in London, B. Castle 1000
Rush, I., industrial liaison officer, Polytechnic 392
Rush & Tompkins Group Ltd., housing construction (trade publication) 608
industrial construction (trade publication) 336
Rusling, John, Ltd., light alloy scaffolding 79
Russell, J. E., yield stress/ultimate tensile stress ratio 354
Russia
British Industrial Exhibition (Moscow) 95
desalination of water 1105
engineering achievements in 787
export statistics to 95
Fiat motor car factory for 275
high-voltage dc power transmission 583
Luna achievements 880
standards discussions with UK delegation 169
Ruston-Bucyrus Ltd., excavator demonstration 637
Ruston & Hornsby Ltd., agreement with Kemper en Van Twist Diesel NV 705
diesel engine type 6ARM (trade publication) 1036
marine and industrial diesels (trade publication) 302
Ryan, M., architects on their metal 680
Ryman-Edgleys Ltd., fire protection of steel 599

S

S.10 spot welding gun, hand-held, Portable Welders 462
S.A. Metallurgique d'Esperance-Longdoz, nickel alloy for instruments 74
Saab, exhibits at Paris Automobile Salon 664
Saad, M. A., Heat Transfer and Fluid Mechanics Proceedings (book) 909
Sacher, D., on Physics for Engineering Technology (book) 255
SAFARI-1 research reactor 534
Safety, at sea, introduction to, by J. W. Bull (book) 1111
of structures, by A. G. Pugsley (book) 909
road, White Paper on government policy 226
Safety cordon, Florina 579
Safety features in pulp bleaching plant 811
Safety kerb, Ellis-Trief 579
Safety measures machine operator protection system, Proximitor Guard 986
Safety precautions, radioisotope instruments 389
Safety standards, US requirements 1007
Saffire 3 cutting and welding equipment 602
Saint. *See* St
SAL electric log 1011
Salesmen, radio telephone for, Tokyo 743
Salisbury, P. R., container ship designs 925
Salter, W. E. G., on Productivity and Technical Change (book) 1077
Sampling components, gas, Servomex 1028
Sampson, H., on Jane's world railways 1965–66 (book) 381
Sanders & Forster Ltd., castellated beams 172
Sanderson Bros. & Newbold Ltd., steels (trade publication) 428
Sanderson, G., stress corrosion cracking of titanium alloy 204
Sands, R. L., on Powder Metallurgy: Practice and Applications (book) 951
Sandwich construction, by F. J. Plantema (book) 775
Santhia, floating exhibition ship 529
Sardinia high-voltage dc power transmission scheme 546, 1094
Satellite
astronomical, payload for, ESRO 314
ATS-1, weather patterns observation 1118
Early Bird 932–937
experimental, UK 3, GEC 405
Intelsat-2 932–937
non-synchronous type 932
Pioneer VII, launching and objectives of 352
synchronous type 932
UK3, balancing tests 599
compatibility tests in United States 1008
Satellite communication(s), advantages of 932
design of 934
development position and prospects 932. *Correction* 966
function of 936
ground stations network 936
positioning and station-keeping 935
record of activities since 1958 933
Satellite communication terminal, shipborne 1050
Satellite contracts, Hawker Siddeley Dynamics to tender for 481
Satellite dental instrument carrier 485
Satellite launch vehicle, Delta 935
Satellite launching site, Archangel 1117
Satellite spin control and orbital manoeuvring

device, resistojet 1118
Satellite system, communication, Eldo PAS 9
Sauer, R., on Nichtstationäre Probleme der Gasdynamik (book) 1035
Saunders, George, Machinery Co. Ltd., hydraulic excavator 946
Saunders, K. J., on Identification of Plastics and Rubbers (book) 691
Saurer auxiliary power unit 404
Saw, circular (trade publication) 382
masonry (trade publication) 818
powder finish on 851
see also Hack-sawing
Saw benches, safety, Textile Machinery 854
Saw sharpening machine, (trade publication) 84
Unicut 380
Sawing machine, band, Regina 945
for billets, Wessex 1142
see also Hacksawing machines
Saxe, R. F., on High-speed photography (book) 335
Scaffolding, light alloy, John Rusling Ltd. 79
Scale-changing modules, electrical, Digikit 1029
Scale prevention and removal in marine plant 160
Scale removal, hydrochloric acid for 490
Scammell-Duramin Silverline Boxvan semi-trailer 507
Scammel I-beam type semi-trailers, TIR bodies for 25
Scammell Lorries Ltd., Challenger T Container semi-trailer 507
Scamp, A. J., motor industry disputes 1119
Scandinavian research guide (book) 129
Scando hoist system for construction sites 721
Scania Vabis diesel engines 941, 946
Scanline indicating controller 71
Scanner, weld, orbital pipe, for tube 33
Scanning materials testing method, magnetic perturbation 509
Scarifier, pedestrian-controlled, American-Lincoln Model-130 725
Schaefer, G., bird flight studies 1046
Schiess Defries, Lilleshall-Schiess-Defries electric and hand winches 1033
Schmidt shaft coupling 1071
Schoenborne, W., marinated fish 28
Schofield, J., on Workshop Processes and Materials (Vol. I) (book) 863
School(s), applied science in, conference on 4
note on 1
engineering in, encouraging interest in 96
secondary, engineering project competition for 916
School of Applied Non-Destructive Testing, non-destructive testing (trade publication) 382
Schoolboys and Girls Exhibition 1036
Schottel propulsion units in ferries *Gosport Queen* and *Portsmouth Queen* 283
Schrader's, A., Son, compressed air components (trade publication) 214
Schuler, M., inertial navigation 87
Schwab, G. O., on Soil and Water Conservation Engineering (book) 515
Schwarz, K. K., noise from pump motors 640
Science
ages of, by C. A. Ronan (book) 691
and arts course, combined, Newcastle upon Tyne University 220
and Industry, Birmingham Museum of 842
and technology, manpower resources for, committee report 698, 701. *Letter* 969
public image of 94
applied, in schools, conference on 4
in schools, note on 1
in management, development of 4
Medicine and Technology, exhibition of, Westminster Abbey 229
'Nuffield O-level, publication of 50
technology, education and management, Lord Kings Norton 1000
Towards More Creative, conference on 4
Science in General Management Ltd. *See* Sigma
Science Museum, Engineer's Day exhibition at 916. *Letter* 969
machine tool collection at, by K. R. Gilbert (book) 301, 1077
Science Research Council
annual report 740
grant to Mr. D. B. Welbourn 179
Petrel research rocket 458
UK-3 satellite 1008
work of 53
Scientific Data Systems Inc., S-TWO digital computer 1032
Scientific periodicals, guide to, by M. J. Fowler (book) 1145
Scientific System Ltd., Transrice control units 371
Scientifica Europe, portable laser 292
Scientist(s), and war, by Sir Solly Zuckerman (book) 301
effective writing for, by J. H. Ticky (book) 649
use of qualified, for R & D 964. *Letter* 1051
women. *See* Women
Scimitar, Reliant, motor car 753
Scintillation counters 385
Scollay, I. J., cold moulding 1062
Scooter sales position and prospects 923
Scotland
AEI factories for production of telephone equipment 984
EITB activities 138
electricity supply industry 1015
nuclear power stations 1015
power stations, development position and prospects 1015
SITB training centre 138
Scott, Andrew (Civil Engineers) Ltd., Aberavon swimming pool 109
Scott Bader & Co., Ltd., Crystic-189 reinforced polyester for sewage effluent measuring flume 764
moulding with resins (trade publication) 1078
Scott, Ernest, & Co. Ltd., pulp bleaching techniques 810
Scott McQuay Hot Rod coolers 1144
Scott, R. E., on Elements of Linear Circuits (book) 381
Scottish Materials Handling Conference 38
Scottish Mechanical Light Industries Ltd., automated feed production plant for farm 577
Scottish Occupational Health Laboratory Service Ltd., 881
Scottish Pipework Engineering and Allied Training Group 962
Scrap, reduction campaign, Rank Taylor Hobson 1051
Screening unit, process, Shallomatic 212
Screw(s), planetary, Transrol 990
Screw thread breakage detector, textile, dropper switch, Stoptex 1139
see also Threading
Screwdriver, air-operated, Avdel 1144
auto-start pneumatic, Desoutter 557
pneumatic (trade publication) 516
Scribing tool, Air Scribe 300
Scully, J. C. on Fundamentals of Corrosion (book) 129
stress corrosion cracking of titanium alloy 204
S. E. Laboratories (Engineering) Ltd., medical pressure transducer 690
multi-channel amplifier 250
System 4000 modular electronics packaging 715
transducer/converter 291
Sea, safety at, introduction to, by J. W. Bull (book) 1111
Sea Dart ship-to-air missile, Hawker Siddeley Dynamics 492
Sea-floor drilling and production 593
Sea-Land Service Inc. 875
Sea Quest drilling rig in North Sea 229
trials 55
Sea Truck motor boat 189
Sea water, desalination
by nuclear reactors 533
comment on 281
fresh water from, ADLRI 189
Seal(s)
for semiconductors, Bell 1134
honeycomb, Burnley 405
mechanical, Chemiflex 292
mechanical shaft, Sealol 121
piston head, for rams and jacks, Dowty Seals 862
rod, for rams and jacks, Dowty Seals 862
Sealant, aircraft, curing system for 311
joint, Unilast 290
Sudbury Wet-Metal Protector 1107
Sealant Manufacturers' Conference, joint movements in curtain-wall structures 128
Sealing ring, Cross Manufacturing Ltd. 72
Sealing strip, building (trade publication) 214
Sealol Ltd., mechanical shaft seal 121
Seaman, M., Loughborough University 98
Seamen, strike of, effect on CEGB 49
Seastar closed-circuit television in *Spero* cargo ship 398
Seastar II navigational closed circuit television system 417
Seaverodvinski, dredger, trials 744
Secondary schools, engineering project competition for 916
Sectional buildings (trade publication) 428
Security in new buildings 833
Seed kale, harvesting machine for, Hesston-260, 354
SeeLite fibre optics lighting system 620
Selcom refrigerating unit 941
Selective employment tax 957
comment on 830
Seligman, H., MHD power generation 105
Selson Machine Tool Co. Ltd., Polymat key-seating machines 944
Selwood, William R., induced flow pump (trade publication) 608
Semiconducting diamond for thermistor 1104
Semiconductor(s), ceramic, superconducting, NBS 28
metal oxide (MOSC), G. Siddall 54
seals for, Bell 1134
Vol. 1 by E. J. Cassignol (book) 649
Semiconductor devices, cooling device for, NBS 246
silicon planar 101
Semiconductor lasers, SERL 770
Semiconductor manufacture, ultrasonic stitch-bonder for 166
Semiconductor rectifiers, and thyristors, oil cooling of 794
for high-voltage dc power transmission 583
Semi-trailer. *See* Trailer, semi
Sendzimir hot-dip strip galvanizing line 848
Sensor, industrial, Mec-Test 376
Senzani of Brevetti, Transauto car parking accessory 881
Separation processes, membrane. *See* Membrane separation processes
Separator, air, for cleaning granular products, Gunson's 1030
Sepiolite improvement of vitreous enamels 682
Sercel, digital voltmeters 291
Series valves for high-voltage dc power transmission 583
Service, Industrial Relations Advisory 657
Services Electronics Research Laboratory
activities 769
carbon dioxide lasers 770
gas lasers 769
neutron sources 770
open day 769
ring laser 769
semiconductor laser 770
super-power continuous-wave travelling-wave tubes 769
Servicised Ltd., building sealing strip (trade publication) 214
Servo motor package, Vickers Sperry Rand 558
Servomex Control, gas sampling components 1028
Setright, L. J. K., on History of the World's Motorcycles (book) 607
Severn, River, reservoir for regulating flow of 755
Severn Suspension Bridge
Aust anchorage 453
Beachley anchorage 453
box deck design 452
construction statistics 453
deck sections 455
design and construction 449
inclined deck suspenders 453
list of contractors 456
main cables 454
purpose and history of 449
steelwork finishing 456
superstructure 454
superstructure contract 456
total length 453
Severn Tunnel, steam pumping plant. *Letter* 1051
Sewage and wastes, Pegpak chokeless packaged pump for 767
Sewage effluent measuring flume, Crystic 189 reinforced polyester for 764
Sewage treatment, Cross Cut sludge lifter for 790
Sewage treatment plant, electrolytic 621
Sewage treatment unit, Marine Defecamat 157
Seymour, W. D. BACIE annual conference 572
Sfintesco, S. F., regulations for design of steel structures 676
SGB Shuttering Ltd., Tableform system of shuttering

209
SGS-Fairchild Ltd.
dual matched transistors 163
integrated circuits 804
microcircuits (trade publication) 382
operation of hybrid computers 1064
silicon planar semi-conductor devices 101
Shackleton, Lord, conference on profiting by quality and reliability (Blackpool) 877
Shaft coupling, Schmidt 1071
Shaft seal, mechanical, Sealol 121
Shakespeare, C. R., on Powder Metallurgy: Practice and Applications (book) 951
Shallomatic process screening unit 212
Shallow-draught vessel, *Aberthaw Fisher*, for generating plant 231
Shankland, Cox and Associates, proposals for expansion of Ipswich 480
Shanks & Co. Ltd., penumatically operated slab cutting and transfer unit 898
Shannon, communication theory 410
Sharpening machine, saw, trade publication 84
Unicut 380
Sharples Co., Continuous D-Hydrator automatic pusher centrifuge 857
Sharples horizontal and vertical Super-D-Canters centrifuges (trade publication) 256
Sharples International Tempest batch basket centrifuge 31
Sharples, J. T., electricity for forge heating 771
Shaw, Sir Eyre Massey, London Fire Brigade 362
Shaw, John, & Sons (Salford) Ltd., 250 ton press for holloware 294
400 ton press for British Rail 33
Shear(s), plate (trade publication) 38
Shearing machine, bar, up-cutting, Aireworth 254
Iron Worker 210
Sheet
aluminium, production at Dolgarrog 646
composition-backed (trade publication) 1112
foam-plastic, for structural models 34
galvanized steel, Galvatite 846
latex, extra-wide 326
steel, Supervit 1108
Sheeting, aluminium, Classic pressed 495
Shell International Marine, tanker *Dolabella* 58
Shell-Mex and B.P. Ltd.
Chimneys for industrial oil-fired plants (booklet) 717
exhibits at Fluid Powder Exhibition 560
oil-fired district heating for Highland Holiday Centre, Aviemore 922
TAL pipeline for Central Europe 834
'Warmaire' oil-fired package central heating system 351
Shell mouldings, silicone release agents for 70
steel castings, Catton and Co. Ltd. 127
Shell polyolefins engineering design data, by R. A. Horsley and A. C. Morris (book) 286, 301
Shell roofs, timber (trade publication) 818
Shelving, steel, with hinged or sliding doors 1144
Sheridan Machinery Co. Ltd., newspaper cross-tying machine 1034
Sherritt-Gordon Mines Ltd., acid room insulation 246
Ship(s)
at sea, accidents in 835
automation in 1023
position and prospects of 11
cargo. *See* Cargo ships
container, British Railways 441
data logging equipment in 11
data logging system for, Richardsons Westgarth 981
floating exhibition, *Santhia* 529
merchant ship propulsion, geared diesel engines, advantages 1007
naval, automation in 11
plastics, developments, Bristol-Thorneycroft 1089
recommendations for automatic controls in 788
roll-on/roll-off, *Finnhansa* 1102
Finnpartner 1102
sludge carrier *Sir Joseph Rawlinson*, collision of 835
training, *Engadine*, helicopter operations 534
see also under specific type of ship
Ship stabilizers, by W. Burger and A. G. Corbet (book) 301
Shipbuilding
multiple production in, R. Hurst 921
naval, position and prospects of 699
use of automatic draughting machines in 1023
use of computers in 1023
work study methods for electrical work in 616
Shipbuilding Board, annual report 266
Shipbuilding industry, computer in, design by 661
demarcation disputes in 267
merger announcements 49, 309
Shipbuilding Industry Board, formation of 309
Shipbuilding Industry Training Board 225
in Scotland 138
Shipping losses, merchant, during 1965 619
Ships' Gear International '66 exhibition (London), exhibits at 157. *Corrections* 375, 511
Ships' propellers (trade publication) 952
Shipstainer container handling equipment 926
Shipton Automation (Sales) Ltd., Tel-Stor telephone answering and recording machines 684
Shipton Electronics Ltd., electronic impulse sender 862
Shoes. *See* Footwear
Shorland patrol car 620
Short Bros. & Harland, Belfast military freighter aircraft 445
Blowpipe anti-tank weapon 492
Shorland patrol car 620
Skyvan turboprop utility/transport aircraft 445
Short circuit strength of power transformers, by M. Waters (book) 607
Short, E., electronic telephone exchanges 1088
mechanized letter-sorting system 698
Shorter, D. N., intermittent heating 600
Shotblast plant (trade publication) 516
Shovel, hydraulic loading, Weatherill 944
Track-Marshall 7S 855
tractor, Merton 853
Show, trade. *See* Exhibition
Shreider, Yu. A., on The Monte Carlo Method: The Method of Statistical Trials (book) 255
Shutter heater panels 397
Shuttering, Tableform system of, SGB 209
Sicily, water demineralizing plant for 103
Siddall, G., metal oxide semiconductor 54
Siddle, W. D., on Technical Writing and Presentation (book) 863
Sidney, E., on Business Report Writing (book) 255
Siemens Aktiengesellschaft, Peltier cooling elements 966
Siemens Research Centre, heart-lung machine for preservation of live kidneys 966
Siemens and Smiths Industries, traffic control systems 525
Siemens (United Kingdom) Ltd., traffic signal unit 578
Sifam Electrical Instrument Co. Ltd., pyrometer for steam car 704
pyrometer for tyre temperature measurement 74
Sifmig filler wire (trade publication) 562
Sight and light in industry, conference on 1048
Sigma, activities of 4
merger with Martech 4
Sigma multi-dimension inspection machine (trade publication) 1112
Sign(s) and labels, self adhesive plastics, Webslight 989
Signal analyser, transient 985
Silastoseal B multi-purpose silicone rubber 511
Silhan, S. G., composite construction 679
Silicon-iron alloys, neutron irradiation of 74
Silicon nitride, development trends 555
machining characteristics 555
production of 554
properties of 555
Silicon planar semiconductor devices 101
Silicon power rectifier technology, by R. Wells (book) 649
Silicon rectifiers, replacements for valves, International Rectifier 334
Silicone(s)
damping and hydraulic fluids 338
definition 337
Engineering Outlines 337
essential properties 337
masonry treatments 342
paint resins 342
paper finishes 343
physical forms 337
products and functions 338
properties and uses 338
textile treatments 343
Silicone lubricants 339
Silcolube Concentrate 290
Silicone release agent, Adsil-Two 331
for shell mouldings 70
Silicone resins 337
insulating 341
Silicone rubber(s) 337
Dow Corning 1106
multi-purpose, Silastoseal B 511
properties 341
Silcoset 248
uses 340, 341
Silicone rubber products (trade publication) 864
Silo(s), butyl-lined, Esso 1053
for gypsum rock and perlite storage 1135
level indication, Bin-Dex 898
self-emptying, Flow-Base system 250
Silo design, Kongskilde 1053
Silvaflame Co. Ltd., lathe guards 380
Silver metallizing preparations (trade publication) 910
Silverline Boxvan semi-trailer, Scammell-Duramin 507
Simmonds & Robinson Ltd., Hamlin DRG 2 relay coils 71
Simon Handling Engineers Ltd., Vibra Screw bin activators and feeders for difficult materials 939
Simons-Lobnitz, *Seaverodvinski* dredger, trials 744
Simple approach to electronic computers, by E. H. W. Hersee (book) 335
Simplex Electric Co. Ltd., warm air heaters (trade publication) 336
Simplifix compression fittings 560
Simplifix Couplings Ltd., compression coupling for plastic or glass tube 814
Simplifix compression fittings 560
Simplite Engineering Co. Ltd., Spate induced-flow pump 724
Simplon Plant & Machinery Co. Ltd., Mark II Trailalite mobile floodlight 687
Sims, R., Ocean terminal at Southampton Docks 544
Simulated evolution, artificial intelligence through, by L. J. Fogel, A. J. Owens and M. J. Walsh (book) 909
Sinclair Radionics Ltd., Microvision pocket television 395
Singer Sewing Machine Co. Ltd., spare parts centre at Kettering 788
Singer Vogue motor car 754
Single Line Junior document conveyor 380
Sintering, cermets 431
Sir Joseph Rawlinson, sludge carrier, collision of 835
Siren, flameproof, Davis 462
Sirieys, P. M., on Rheology and Soil Mechanics (book) 909
Sitelight LP gas floodlight 420
Six-Pak magnetostrictive immersible transducer system 124
Sixth-formers and engineering. *Letter* 101
Skagerak car-ferry, sinking of 484
Skefko Ball Bearing Co. Ltd., bearings (trade publication) 994
specialized bearing applications (trade publication) 382
100 tons capacity bogie wagons 1066
Skills analysis training on can-making equipment 182
Skirting board heating panels, Panel-Track 163
Sky Climber rigging hoists 724
Sky 505 vhf air/ground aircraft transceiver 405
Skydel air freight loading system 442
Skyscraper, Toronto-Dominion Bank Tower 56-storey building, design and construction 844
Skyvan turboprop utility/transport aircraft 445
Slab(s) and beams, structural analysis of, by J. Hahn (book) 691
Slab cutting and transfer unit, pneumatically operated, Shanks 898
Slab reheating furnace, control system for 325
Slabbing mills, Fukuyama steelworks 489
Slag, blast furnace, bulk density control 647
Slatter, B. H., Olympus gas turbine 760
Slaughterhouse. *See* Abattoir
Slave units, potentiometer, Intersonde 690
Slawsky, M., MHD power generation 105
Sleeves, insulated solder, Thermofit 1072
Slide viewer, portable, Super-66 833
Slip casting. *See* Casting
Slip-form road paving machine 396, 1076
SLS. *See* Sonar, side-looking
Sludge carrier, *Sir Joseph Rawlinson* collision of 835

Sludge lifter, Cross Cut, for sewage treatment 790
Sludge pump, portable, UVC4 Univac 468
Sluice gates, Haringvliet dam, Netherlands 113
Small Business Act 1043
Small business administration 1043
Small business encouragement in US 1043
Smallpeice, Sir Basil, conference of Institute of Directors 874
S.M.D. Ltd., Model G. 70 Mk. 1 portable methanometer 332
Smeed, R. J., forecasts of traffic 1006
Smell elimination, Allplas plastic balls for 275
Smirnov, V. V., on Rolling Mills (book) 951
Smith, A. R., report on air pollution 8
Smith, A. W., ropes from man-made fibres 355
Smith-Corona Ltd., copying machines 598
Smith, Frederick & Co., heating furnace 601
Smith, J. D., gear research 180
Smith, J. M., steel bridges in Lancashire 678
Smith, John, (Keighley) Ltd., cranes (trade publication) 692
Smith, J. W., diamond-tipped surgical instruments 397
Smith, K., non-professionals 707
Smith, K. A., electron microscope 825
Smith, M. D., plating of plastics 1026
Smith, R., survey into effect on workers by mergers 219
Smith, R. D., fast reactors 1150
Smith, Stanley & Co., composition-backed sheets (trade publication) 1112
Smith, Thomas, & Sons (Rodley) Ltd., hydraulic excavator 637
Smiths Industries Ltd., double-inlet fans 639
electrophoretic painting, continuous in-line plant 726
electro-thermal actuator 72
flight control system equipment 405
industrial instrumentation (trade publication) 214
Smiths Jacking Systems Ltd., exhibits at Fluid Power Exhibition 560
Smoke concentration and control in Britain, review of 571
Smoke control approved appliances, grants system 8
Smoke control areas, slow development of 8
Smoke density values of building materials, NBS 204
Smoke detection by ionization 389
Smoke detector, SWD 159
SNECMA, M45 turbofan aircraft engine 491
powerplant for Concorde airliner 321
Snorkel elevating platform 366
Snow, Sir Frederick, Concrete Society's inaugural dinner 699
Soag Machinery Co., Stilex Airfoil foil embossing machine 858
Social history of engineering, by W. H. G. Armytage (book) 171
Social sciences, operational research and, by J. R. Lawrence (book) 733
Société Application de Machines Motrice, hydraulic motors 558
Société Générale d'Entreprises, La Rance power station 19
Société Maritime Shell of France, tanker *Dolabella* 58
Society of Aerospace Material and Process Engineers, polyphenylene synthesis, F. Long 992
Society of American Value Engineers Convention, by T. A. Ross (book) 607
Society of British Aerospace Companies, Farnborough Show. *See* Farnborough Show
Society of Chemical Industry, report on air pollution 8
Society of Instrument Technology, automated diode assembly, M. J. Fry 899
on-line measurement and inspection and their impact on quality conference 84
symposium on presentation of data (Middlesbrough) 1146
Sockets (trade publication) 952
Sodium chlorate, electrochemical machining with 804
Sodium chlorate handling for pump bleaching plant 810
Soil and water conservation engineering, by G. O. Schwab, R. K. Frevert, T. W. Edminster and K. K. Barnes (book) 515
Soil compactor, vibratory, Ho-Pac 946
Soil consolidation press, error reduction in 164
Soil mechanics, rheology and, by J. Kravtchenko and P. M. Sirieys (book) 909
Soil warming for strawberry beds 705
Solar Industries Ltd., interest in Associated Heat Services 784
Solar protons and Moon's surface 204
Solar *see also* Sun
Solartron Electronics Ltd., resolved components indicator 803
Solbraze Ltd., Autoflame soldering and brazing machines 644
Solder sleeves, insulated Thermofit 1072
Soldering machines, Autoflame 644
Soldering system, closely controlled, BFI Electronics 1066
Soldering unit, electric, Soldermaster 466
Soldermaster electric soldering unit 466
Solenoid(s), control, Super series (Plessey) 250
Magnetic Devices 773
Rotenoid rotary, dynamic torque tracer for testing 850
Solenoid operated pneumatic microvalves, Martonair 905
Solenoid valve. *See* Valve
Solex 40 PICS carburetter 627
Solid(s), mechanics of, introduction to the, by A. M. Freudenthal (book) 1035
nature of, by A. Holden (book) 255
strong, by A. Kelly (book) 381
Solid-state control for induction heating 1104
Solid-state control instrument for motorized regulation, Kent 418
Solid State Devices, conference on 172
Solid state lighting control system 884
Solodov, A. V., on Linear Automatic Control Systems with Varying Parameters (book) 301
Solus Schall Ltd., underwater gas pipeline to Isle of Wight 156
Somers, Walter, Ltd., Chesterton Windmill 275
Sonar, side-looking, Joachim G. Stephan 371
Sonar sound navigation and ranging 303
Sonatest, Emag-8 demagnetizing unit 207
Sonic aid for guiding blind persons 484
Sonochemistry, new field of 1040
Sopwith, D. G., retirement from NEL 615
Sorting of tinplate sheets, SCOW 170
Sorting conveyor, automatic, Sortrac III 945
Sorting equipment, mail, automatic 1065
Sorting machine, rock, optical 82
Sortrac III automatic sorting conveyor 945
Sotheby & Co., auction of vintage cars 103
Sound absorbing blocks, Absorbit 682
Sound level meter, Minophon 461
Sound navigation and ranging 303
Souriau SA, Souriau type 82 connectors 1072
Souriau type 82 connectors 1072
South African Atomic Energy Board, SAFARI-I research reactor 534
South Durham Steel & Iron Co. Ltd., merger announcement 958
South East England water supply, report on 279
South London Electrical Equipment Co. Ltd., integrating weld monitor 768
South of Scotland Electricity Board, activities of 1015
Stella-Cockenzie power transmission line 351
South Wales, power station development 367
South Wales Electricity Board, shutter heater panels 397
South Wales Switchgear Ltd., pocket substation 1074
substation enclosure 56
South Western Marine Factors Ltd., K11 marine control unit 967
1100SS outboard motor 967
Southampton Docks, ocean terminal at 544
Southampton/Portsmouth area, urban growth in, C. Buchanan report on 221
Southern Gas Board, domestic gas fire sales ban 744
underwater pipeline to Isle of Wight 155
winter gas supplies problem 745
Southwest Research Institute, magnetic perturbation scanning materials testing method 509
Southwest Welding & Manufacturing Co., mechanical construction equipment (trade publication) 910
Sovereign motor car, Daimler 713
Sovex document handling system, CEGB 145
Space, automatic control in, symposium (Vienna) 562
Space anterinae, extending booms for 247
Space chamber simulators, 519
Space-charge waves, longitudinal, by R. E. Trotman (book) 427
Space equipment, aeronautical and (trade publication) 336
Space flight, Gemini-12, accomplishments 920
Space flight techniques 535
Space probe contracts, Hawker Siddeley Dynamics to tender for 481
Space research, brake system for 353
Space ship propulsion by ground based laser power 247
Space simulation, symposium on (Philadelphia) 1112
Space structures, International Conference on 718
Spacecraft, Gemini-10, results of 187
Lunar Orbiter I and II, photography of Moon's surface by 1126
Surveyor, soft landing on Moon 1126
Spaght, M. E., oil and gas from under the sea 584
Spalding, D. B., on Engineering Thermodynamics (book) 1111
Spanner, torque controlled, Desoutter 557
Spark discharge, conference on 382
Spark-erosion machine, GKN Model E 859
Spark-ignition engines: fuel injection development, by C. H. Fisher (book) 381
Spate induced-flow pump 724
Spear & Jackson Ltd., powder finish on saws 851
Specialist, thermophysics, conference 428
Specific heats at low temperatures, by E. S. R. Gopal 37
Spectra-Physics Inc., laser beam expander-filter 1030
Spectrochemical abstracts 951
Speed control, and light dimmer, thyristor controlled, ADAP 463
by fluidic devices 566
electric motor, KPE 1072
Speed reducers, Bantam 989
Speedcrete Ltd., Schwing ABP30 concrete pump 686
Speedex 5th concrete mixer 1075
Speedy timber joist hanger 375
Spembly Technical Products Ltd., Dimplar cryogenic insulation 600
Multitemp thermocouple instruments 553
Unitemp thermocouple instruments 553
Spence, Sir Basil, Bonnington and Collins, two-level roadway for Gateshead 311
Spencer, G. D. Co. Ltd., SG iron bridge bearing 120
Spencer & Halstead Ltd., shotblast plant (trade publication) 516
Spencer Knight & Co. Ltd., Reinforced Plastics Exhibition 922
Spero cargo ship, telecommunications on 398
Sperry Gyroscope Co. Ltd., magnetic storage drum (trade publication) 172
Mk XXX gyro compass 159
servo motor package 558
synchro resolvers 803
Sperryn & Co. Ltd., gas control (trade publication) 650
Spey turbofan engine 107
for Corsair II aircraft 227
Spheroidal graphite cast iron, austenitic, propeller 158
for bridge bearing 120
Spider, Fiat 124 Sports, motor car 840
Spiegler, K. S., on Principles of Desalination (book) 469
Spiral Development Co., plastic covered lightweight steel tubing 1107
Spiral groove bearings, by E. A. Muijderman (book) 607
Spiral Tube (Heat Transfer) Ltd., cooling of underground cables 1009
Spirax-Sarco Ltd., correspondence course on steam engineering 915
Spitfire 70 self-priming pumps 906
Spon Engineering Co. Ltd., Arc Rule arc-drawing rule 421
Spool(s), reeling, propathene polypropylene for 285
wire, fibre drum package for 70
Spool valve in fluidics 565
Sporn, P., CIGRÉ conference 16
on Research in Electric Power (book) 775
Sports Spider 124 motor car, Fiat 886
Spray booth, Superwash 167
Spray gun, electrostatic, Mettastatic 945

Spray hazards on roads 352
Spray head, triple-nozzle, Swathomatic 814
Spray nozzle, vibrajet, for herbicides 792
Spray nozzles fitting to spray booms 639
Spray-O-Mat rotating head for vessel internal cleaning 813
Spray painting. *See* Painting
Spray steelmaking process, BISRA 708
Spray tank, blow-moulded, Harcostar, 948
Spraying, gun, metal, Metco 77
metal, of bearing housings 286
of plastics and metal powders 1026
Spraying pistol, powder, Metallisation 901
Spring(s), brush (trade publication) 336
Spring units in fluidics 565
Spruemaster granulator cutters 248
Squeez-Crete lorry-mounted concrete pump 638
St. Lawrence River, Trois-Rivieres Bridge over 1100
Stability in power transmission, CIGRÈ conference 16
Stabilizers, ship, by W. Burger and A. G. Corbet (book) 301
static network, GEC 764
Stable hole elimination equipment 55
Stable hole elimination exhibition, Swadlincote 55
Stacey, N. A. H., on Mergers in Modern Business 863
Staff status for all workers, report 526
Staffa hydraulic motor 606
Staging, suspended, Robertson 254
Stainless steel
austenitic (trade publication) 336
for bodies of commerical motor vehicles, Staybrite 1049
hydraulic fittings in 648
introduction to, by J. G. Parr and A. Hanson (book) 335
pneumatic fittings in 648
welding technique, Rollo-Hardy 369
Stainless steel check valves, Normalair 250
Stainless steel piping for dissimilar liquids 551
Stainless steel rotary vacuum filter 167
Stainless steel water pipes 442
Supatube 647
Staircases, design of ergonomically efficient 1046
Stal Laval Lungström reaction steam turbines 498
Stal-Laval UD2 type compressors 1014
STAN37/38/39 zero visibility landing system 460
Standard(s), of welding achievement during training, by F. Clark and J. Twining (book) 37
Russian discussions with UK delegation 169
see also British Standards Institution; United States National Bureau of Standards
Standard-Knapp end open case packer (trade publication) 1112
Standard Messo, vacuum degassing palnt for plate steels 983
Standard Telephones & Cables Ltd.
alarm system for Mersey Tunnel 230
insertion loss measurement equipment 689
light traffic route microwave communications system 1049
polycarbonate capacitors 689
STAN 37/38/39 zero visiblity landing system 460
Standard-Triumph, rationalization programme 629
Triumph GT6 motor car 629
Standen, F. A., & Sons, Crop-Hopper multi-tool carrier 147
Standford Research Institute, vacuum tube diode, microscopic 805
Stanley steam car 704
Stannett, V., irradiation of textiles 204
Stansfield, F. M., foam-plastic sheet for structural models 34
Starfighter fighter aircraft, grounding of 1047
Starter, jet air, Mark 12A Stad, Auto Diesels 901
synchronous machines and (trade publication) 910
Starter-ring teeth, hobbing machine for 81
Startrite Engineering (Sales) Ltd., multihead drilling tables 513
Statistical kit, Technical Prototypes 270
Statistical trials, the method of: Monte Carlo method, by Yu. A. Shreider (book) 255
Statistics, basic, by J. Murdoch and J. A. Barnes 271
Statistics course, Cranfield 270
Status and benefits in industry (report) Industrial Society 526
Staveley Industries Ltd., acquisition of Kendall and Gent from George Cohen 600 Group 656
research on machine tool demand 1066
Staybrite stainless steel for bodies of commerical motor vehicles 1049
Steam, geothermal, prospects of greater use 285
Steam car, Stanley 704
Steam cleaner, Stone-Vapor 125
Steam engine(s), Severn Tunnel pumping plant. *Letter* 1051
Steam engineering, correspondence course on 915
Steam generating heavy water nuclear reactor 533
Steam Specialities Ltd., Angelery hot water generator 768
Steam turbine. *See* Turbine
Stedall Machine Tool Co. Ltd., machine tools (trade publication) 864
Steel(s)
British Standard En, mechanical and physical properties of (Vol. 2), by J. Woolman and R. A. Mottram (book) 171
carbon in, Dynacarb analyser for 600
corrosion of, in concrete 850
fire protection of 599
for high temperature service (book) 1145
heat treatment. *See* Heat treatment and under specific type of heat treatment
high-strength, welding of, Westinghouse 717
high-yield, weldable mild steel and, O. A. Kerensky 676
nickel, storage tank for liquid oxygen 979
non-metallic inclusions in, (Part 2), by R. Kiessling and N. Lange (book) 951
plate, vacuum degassing plant for 983
stainless. *See* Stainless steel
structural, corrosion prevention of, BS 704
in Canada (trade publication) 608
in industrialized building, J. W. Davidson 680
J. M. Roberts, 676, 680
strong tough, conference on 1036
use of, G. Haaijer 680
tool, Cyclone-70 289
trade publication 428
weldable mild, and high-yield steels, O. A. Kerensky 676
Steel castings, shell moulded, Catton & Co. Ltd. 127
Steel Company of Wales Ltd., automatic static swtiching equipment for tinplate classifying line 170
ore terminal for Port Talbot 353
Steel designers' manual (book) 909
Steel fabrication and anti-corrosive treatment 1025
Steel foundry. *See* Foundry
Steel industry, Bensen Report on 177
merger announcements 958
nationalization of 48
members of organizing committee 614
Steel, Peech & Tozer Ltd., training centre 1003
Steel production statistics 1083
Steel requirements for nuclear submarines 311
Steel rope. *See* Wire rope
Steel sheet, galvanized, Galvatite, 846
Supervit 1108
Steel shelving with hinged or sliding doors 1144
Steel strip, copper-coated, Armco-Pittsburgh SA 908
Steel structures, regulations for design of S. F. Sfintesco 676
thin walled, symposium on 1036
Steel tubing, plastic-covered, Spiral 1107
trade publication 214
Steelmaking, model tests in 807
spray process, BISRA 708
trade publication 130
Steelmaking plant, oxygen (trade publication) 1036
Steelwork, protection of, discussion on papers 679
structural, conference on 256
in bridgework and multi-storey buildings, conference on 676
Steelwork fabrication, and maintenance, W. H. Arch 679
and protection, E. P. Gallagher 679
Steelworks, Fukuyama 189, 488
Steelworks plant, output and order trends 438
Steering gear, electro-hydraulic, Vosper 158
Steers, C., Training Officers Guide to the Education System in England and Wales 178
Steinel, Bernhard, TS 500 rotary transfer machine 602
Stella-Cockenzie power transmission line 351
stoppage on 1018
Stellar Components (Sales) Ltd., dry battery site alarm 249
Stephan, J. G., side-looking sonar 371
Stephen, J., neutron irradiation of magnets 74
Stephens Belting Co. Ltd., belting material 990
Stephens, R. V., Industrial Relations Advisory Service 657
Stereophonic broadcasting, BBC 193, 230
Stevens, H. G., Co. Ltd., transient signal analyser 985
Stevens, J., traffic forecasts. *Letter* 1006
Stevens, W. R., presidential address, Association of Public Lighting Engineers 619
Stevenson, R. E., supervisory training 139
Steward, J. K., member of Computer Board for Universities and Research Councils 348
Stewart, M., Concrete Society's inaugural dinner 699
Minister for Economic Affairs 697
Stewart, O., on Aviation: Creative Ideas (book) 255
Stewarts & Lloyds Ltd., merger announcement 958
Oakham Ness tanker terminal insulating pipes 418
tube inspection equipment 641
Stieber (Great Britain) Ltd., Mini free-wheel clutch 511
Stieber, J., on Employment Problems of Automation and Advanced Technology: Internal Perspective (book) 83
Stilex Airfoil foil embossing machine 858
Stinton, D., on Anatomy of the Aeroplane (book) 951
Stitchbonder, ultrasonic, for semiconductor manufacture 166
Stitching of evaporator for SS *Chusan* 169
Stokes, Sir Donald, motor vehicle research 1000
Stokes model 21 freeze drying equipment 551
Stone, J., & Co. (Deptford) Ltd., Stone-Vapor steam cleaner 125
Stone Manganese Marine Ltd., contrarotating ships' propellers 354
Stone-Vapor steam cleaner 125
Stoptex dropper switch textile thread breakage detector 1139
Stora Kopparbergs Bergslags AB, bleached sulphite pulp process 810
Stora two-stage pulping process 496
Storage, and handling system, Powerstor, for use with forklift trucks, A. G. Wild 464
trade publication 214
Storage equipment, handling and (trade publication) 1146
Storage indicators, bulk, Elniva 1071
Storage system (trade publication) 302
Storage tank. *See* Tank
Stores support ship, *Stromness* 534
Stork Zwolle RHo 216k diesel engine, cardboard cut-out model 9, 227
Stothert and Pitt tower crane 79
Stoudt, H. W., on Human Body in Equipment Design (book) 427
Stowaway bicycle, Moulton 14
Stowers, A., old steam engines 1051
Strada motor car, Bizzarrini 887
Straddle carriers, Powerbeam, for container handling 209
Straddle lift carrier in Finnlines roll-on/roll-off ships 1102
Strain gauge(s), basic physics of 735
characteristics of 735
definition of 735
Engineering Outline 735
multichannel instruments 738
origin of 735
pressure measurement by 737
Redshaw foil 738
resistance measurements by 736
sensitivity of 735
stress measurement by 737
types of 735
use in extreme environments 738
Wheatstone bridge circuit for 737
Strain & Robertson, Carolina Port B power station 1018
Straps, plastic, Rainbow 862
Strathclyde University, fluid power switching 287
Stokes model 21 freeze drying equipment 551
Strauss, W., on Industrial Gas Cleaning (book) 561
Strawberry beds, soil warming for 705
Stream runoff, theory of, by N. P. Chebotarev (book) 909

Strebor Fire Protection Ltd., portable trailer-mounted fire-fighting water monitor 980
Street lighting, review of value of, K. L. Duncan 619
Streetly Manufacturing Co. Ltd., all-plastic filter unit 207
Strength, fracture and workability of coal, by I. Evans and C. D. Pomeroy (book) 775
Strength of materials: a course for students, by P. Black (book) 691
Stress, fatigue, in girder decks, Goodearll 678
thermal, in turbine blades 1070
Stress analysis, conference on, RAeS 1078
Stress corrosion cracking of titanium alloy 204
Stress measurement by strain guage 737
Stress ratio in structural engineering 354
Strike of motor car deliverymen, end of 957
Strip, aluminium, cut-to-length line for, Humphris 987
steel, copper-coated, Armco-Pittsburgh SA 908
Strip feed for presses, Festo-Pneumatic 464
Strip galvanizing line, hot-dip, Sendzimir 848
Stroboscopes
applications of 133
basic physics 131
definition 131
Engineering Outline 131. *Letter* 746
flash type 132
history of 131
in photography 134
shutter types 131
Strobosun, flash stroboscope 132
Stromness, stores support ship 534
Strong solids, by A. Kelly (book) 381
Structural analysis, iterative methods in, by S. Blaszkowiak and Z. Kaczkowski (book) 1077
matrices for, by S. J. McMinn (book) 817
of beams and slabs, by J. Hahn (book) 691
Structural engineering, stress ratio in 354
Structural mechanics, numerical and matrix methods in, by P. C. Wang (book) 255
Structural metal(s), application of fracture toughness parameters to, by H. D. Greenberg (book) 733
Structural metallurgy, principles of, by B. Harocopos (book) 993
Structural model(s), foam-plastic sheet for, 34
Structural model-testing at Loughborough 1046
Structural steel
corrosion prevention of, BS 704
in Canada (trade publication) 608
in industrialized building, J. W. Davidson 680
J. E. Roberts 676, 680
strong tough, conference on 1036
use of, G. Haaijer 680
Structural steelwork. *See* Steelwork
Structures
basic theory of, by J. S. C. Browne (book) 469
design of, use of foam-plastic models 34
engineering, creep in, by J. Hult (book) 909
linear framed, by M. S. Gregory (book) 561
plane, model analysis of, by T. M. Charlton (book) 37
precast concrete, design philosophy and 910
real loading on 676
safety of, by A. G. Pugsley (book) 909
space, International Conference on 718
steel, regulations for design of, S. F. Sfintesco 676
thin walled, symposium on 1036
Structures testing laboratory, BRS 143
Struts, Euler loads determination, J. M. Townson 206
Stuhlman, Richard, Polymat key-seating machines 944
Sturtevant Engineering Co. Ltd., fluid-bed drying plant for coal 808
S-TWO digital computer 1032
Subcontract sales and components, output and order trends 438
Subcontracting, Cornerstone of the Industry (exhibition) 130
Submarine(s)
nuclear, steel requirements for 311
Polaris, *Resolution* 534
hair-line cracks in hull 574
see also Anti-submarine
Submarine escape training, deaths 574
Submersible undersea vehicle, two-man, DOWB 314
Substation, Penn, 1000 MVA transformer, for 353
pocket 1074
Substation enclosures, new designs for 56
Suction hose, pvc heavy-duty, Kanaflex 774
Sud Aviation. *See* Concorde supersonic airliner
Sudbury Wet-Metal Protector sealant 1107
Suffolk Iron Foundry (1920) Ltd., aluminium filler wire (trade publication) 562
Suitcases, indestructible, Antler, 484
Sulphates in boiler furnaces 1064
Sulphur dioxide, oxidation of, R. E. Barrett 1064
Sulphur dioxide flow in pulp bleaching plant 810
Sulphur dioxide pollution, control measures 8
Sulphur oxide-iron oxide systems, interactions in 1064
Sulphuric acid handling for pulp bleaching plant 810
Sulzer Bros. (London) Ltd., Grafham Water reservoir 154
joint development of LVA 24 diesel engines 435
Summers, John, & Sons Ltd., Galvatite galvanized steel sheet 846
Sendzimir hot-dip strip galvanizing line 848
Sun, television translator powered by 966
see also Solar
Sunbeam Imp motor car, description of 629
Sunbeam Tiger motor car 801
Supa-Nova blow torch 461
Supatube stainless-steel water pipe 647
Super-8 zoom projector 533
Super 66 portable slide viewer 833
Super series control solenoids, Plessey 250
Super Stork electrically-powered portable equipment (trade publication) 130
Superconducting cable, Atomics International 718
Superconducting ceramic semiconductors, NBS 28
Superconducting magnets, applications of 519
Superconductivity, applications of 518
phenomena of 518
Superconductor, Multikon, for magnets 1105
Superconductor materials 509
Super-fluidity, phenomenon of 519
Superior Electric Co., bifilar stepping motor 985
Superline Bodies, TIR bodies for Scammell I-beam type semi-trailers 25
Supermatic washing machine, Hotpoint 703
Supervisors, Training of, EITB 346
Supervisory studies, teachers of, association of, formation and activities 139
Supervisory training, development position and recommendations 139
Supervisory Training: New Approach to Management 225
Supervit steel sheet 1108
Superwash spray booth 167
Supplies, gas, North Sea, CEGB interest in 667
Suprasec DN rigid urethane foam 370
Suprasec foam-making chemicals 246
Surface finish
definition 173
Engineering Outline 173
importance of 173
measurement methods and devices 174
roughness scales 173
specification of 175, 176
specification standards 175, 176
Surface finish measuring device, Talysurf 175
Surface roughness, measurement methods and devices 174
scales of 173
Surface texture, components of 174
Surface treatments of metals, exhibition 130
Surge counter AEI 291
Surgery, spare part 745
Surgical instruments, diamond-tipped 397
Surrey University, International Conference on space structures 718
SURV underwater research vessel 274
Surveying, by A. Bannister and S. Raymond (book) 37
Surveyor spacecraft, soft landing on Moon 1126
Suspended staging, Robertson 254
Suspension towers for power transmission line to Sardinia 1096
Sussex-Normandy trade fair (Brighton) 570
Sutcliffe, F. & H. Ltd., sectional buildings (trade publication) 428
Suzuki motor cycles 923
Sven Line, *Spero* cargo ship, telecommunications on 398
Svenska Flaktfabriken hot-pass electrostatic precipitator 498
Svenska Metallverkens Ugns Aktiebolaget AB, Ungsbolaget fuel-fired walking-beam furnaces 859
Swallow, W., chairman of Shipbuilding Industry Board 309
Swan Hunter, stores support ship, *Stromness* 534
Swann, M. M., manpower distribution 702. *Letter* 746
Sward, K., on Machine Tool Maintenance (book) 37
Swathomatic triple-nozzle spray head 814
SWD smoke detector 159
Sweden, Alvsborg suspension bridge 967
Swedish Atomic Energy Co., water reactor fuel (trade publication) 562
Swedish Lloyd, *Spero* cargo ship, telecommunications on 398
Swedish Military Weather Service, Marconi Myriad computers use in 484
Swematic side-lever grease gun 606
Swimming pool, Aberavon, design and construction, 109
heating, Potterton 661
Swinden, T. A., Plymouth training centre 1043
Swinger portable radiogram 921
Swingfire anti-tank missile, British Aircraft Corp. 492
Switch(es)
automated limit, Edytect Switch 425
dry-reed, Kynmore 814
fluid, principle of 287
foot and palm operated, BHI 606
fuse, Hi-Break 1140
limit, air/hydraulic cylinder, Marbaix 690
hunting tooth, Brookhirst 1028
pressure, Coutant Electronics Ltd. 162
Stoptex dropper, textile thread breakage detector 1139
time, for domestic systems, Venner 73
twin, for electric storage radiators 648
ultrasonic beam, for merry-go-round railway trains 763
zero speed, Airpax 249
Switch assemblies, pre-wired, Digitizer Techniques Ltd. 71
Switch control, time, Timatic Mk. 11 332
Switch splitters, Memspel and Memspan 70
Switchboard, Power-70 251
Switchboard cubicles (trade publication) 1146
Switchfuses, Memspel and Memspan 70
Switchgear, low-voltage, laminated busbar in, Ellison 243
metal-clad high-voltage 16
trade publication 608
Switching, fluid power, atmospheric control 287
Switching devices, pneumatic, Technelog 553
Switching equipment, automatic static, for tinplate classifying line, SCOW 170
Logicon static 285
Switching system, Logicon, for crusher plant 1105
static, Fairstat 1140
Switching techniques, relay, handbook of, by J. Th. Appels and B. H. Geels (book) 607
Switzerland, immigrant worker position, E. Hofmann 569
Sworder, D., on Optimal Adaptive Control Systems (book) 469
Sykes, Henry, Ltd., automatic priming pump (trade publication) 1146
UVC4 Univac portable sludge pump 468
Sykes, W. E., Ltd., machines loaned for gear research 179
Sylvania International, lamps for shock or vibration applications 1139
Symmetry principles in physics 75
Synchro engineering handbook, by A. R. Upson and J. H. Batchelor (book) 171
Synchro resolvers, Sperry 803
Synchrocyclotron, definition 472
description of 476
uses 476
Synchronous machines and starters (trade publication) 910
Synchrotron
definition 472
description of 476
examples of 477
proton 477
uses 477
Syntax-orientated translator, by P. Z. Ingerman (book) 427
Synthetic materials by duplication of geological processes 247
System analyser for refrigerating and air conditioning systems, Imperial-Eastman range of 512

System analysis by digital computer, by F. F. Kuo and J. F. Kaiser (book) 863
System Computers Ltd., laser equipment 947
Systems motor, Union Carbide 1073

T

T-slot clamp, Carver 168
Table, polishing, Ringway table 299
rotary, tilting and dividing, Euco 687
rotary feed, Enots 907
Tableform, folding-leg 768
Tableform system of shuttering SGB 209
Tabulator, printing balancing, ICT 1075
Tacan radio beam range and direction finding system 304
TACE. *See* Turbine Automatic Control Equipment
Tachometer-generator, flameproof, AEI 1139
Tacks, thumb, self-adhesive, Mactac International 461
Tagus bridge, Lisbon, inauguration of 276
Tailoring, use of computer in 1009
use of laser in 1009
use of photogrammetry in 1009
Takdust Products Ltd., Takstripper 9/99 paint stripper 905
Takstripper 9/99 paint stripper 905
TAL pipeline for Central Europe 834
Talystep thin-film thickness measuring instrument 808
Talysurf surface finish measuring device 175
Tamping machine for railway track maintenance 448
Tangyes Ltd., Mini-Pak hydraulic hand pump 906
Tank(s)
aluminium, for polyethylene pellets 731
battle, Chieftain 621
Centurion battle, zip covers for 681
floating flexible, advantages of 982
for bitumen refinery 683
propane, trailer-mounted, British Oxygen 857
spray, blow-moulded, Harcostar 948
storage, nickel steel, for liquid oxygen 979
tar or bitumen storage, Cartematic 855
Tank cars, rail, thermographic examination of foam insulation 128
Tank level gauge. *See* Level gauge
Tank lining, butyl rubber 1138
Tank roofs, floating (trade publication) 910
Tanker, *Dolabella*, automatic control in 58
jumboizing, hull connecting technique at sea 355
large, French Committee on 398
rail. *See* Rail tank cars
road. *See* Motor vehicle(s), tanker
Tanker terminal for Humber at Immingham 274
Tape(s), pipe heating, Isotape 787
Tape machine, Video, to diagnose machine breakdowns 1134
Tape protection cabinet, Chubb 103
Tape recorder, data, with simplified tape drive, Honeywell 1031
magnetic, Epsylon 289
Tape system, magnetic 378
Tape testing equipment, Gresham Lion 602
Tar storage tank, Cartematic 855
Tarbet, Cecil, instrument design 715
Tarex (England) Ltd., copying lathe (trade publication) 302
Tarlton, D. L., multi-storey buildings in Canada 679
Tarmac Civil Engineering Ltd., bitumen refinery, Eastham 683
Tarner, H. C. J., remote-camera control 884
Tarnovskii, I. Ya., on Deformation of Metals During Rolling (book) 909
Taskers of Andover (1932) Ltd., Pedigree Plus Straight Frame semi-trailer chassis 505
Tate, A. E., use of computer service 150
Tate & Lyle Ltd., use of computer service 150
Tawse, William, Ltd., Wiggins Teape paper mills, Fort William 495
Tay road bridge, opening of 312
Taylor, A. H., soil warming for strawberry beds 705
Taylor, E. Openshaw, on Electric Power Distribution: 415V–33kV (book) 817
Taylor, F. W., scientific management activities 4
Taylor, J. W. R., on Jane's all the world's aircraft 1966–67 (book) 1145
Taylor Rustless Fittings Co. Ltd., autoclave (trade publication) 302
Taylor, W., occupational health laboratory service 882
Tea breaks, natural break', Distillers 145
Teachers, retraining advocated by Nuffield Foundation 50
Teachers of Supervisory Studies, Association of. formation and activities 139
Teaching apparatus, heat transfer 94
Teaching machine, Carmody Universal Process Tutor 878
for process operator training 102
Teagle, W. T. (Machinery) Ltd., Rapide bale-handling elevator 147
Tecalemit-Jackson, fuel injection system 538
Tecam pneumatic programmer for turret lathe 1133
Techna (Gt. Britain) Ltd., Draweba automatic wire netting machine 1110
Techne (Cambridge) Ltd., pneumatic programmer 809
Tecam pneumatic programmer for turret lathe 1133
Technelog pneumatic switching devices 553
Technelog pneumatic switching devices 553
Technical college, changing role of 1045
Technical Meetings Information Service 951
Technical Prototypes (Sales) Ltd. statistical kit 271
Technical Representation Ltd., cable stripping cartridges 604
Technical writing and presentation, by W. S. Robertson and W. D. Siddle (book) 863
Technicians and chartered engineers. *Letters* 746, 883
Technique, J. Greig 407. *Letters* 487, 707
Technocrats, training of, Cranfield Society 137
Technology, and properties of ferrous alloys for high-temperature use. by M. G. Gemmill (book) 301
and science, manpower resources for, committee report 698, 701 *Letter* 969
public image of 94
Industry and Economic, Growth, P. M. S. Blackett 964
Minister of, A. Wedgwood Benn appointment as 47
F. Cousins resignation as 47
Ministry of, approaching automation, expositions held 568
exhibition, Engineer's Day 96
films on automation 529
science, education and management, Lord Kings Norton 1000
Teddington Engineering Ltd., Motivair duplex compressor 297
Teflon lining for piping for refinery effluent 120
Teha honing and boring machines 514
Tektronix, establishment of 988
Telecommand receiver, GEC 405
Telecommunications, in Euston main line electrification 793
next ten years, F. C. McLean 789
Telecommunications expenditure, statistics 984
Teleflex K11 marine control unit 967
Telefunken AG, hybrid computors 1064
Telegraph Condenser Co. Ltd., rectangular can capacitor using mixed paper/polyester dielectric 730
Telehoist Ltd., Hy-Spill trailer and tractor unit 506
Telematic Rapid System film storage library for parts records, Westinghouse 205
Telephone(s)
noises on lines 920
paging system using pocket telephones, market survey 1008
radio, Compact, Pye 485
for salesmen, Tokyo 743
Plessey Electronics Group 398
pocket phone of unlimited range 96
pocket-sized, Courier 405
Pocketfone, Pye 485
VHF radio, Cossor 1011
video, development position and prospects 1132
Telephone answering and recording machines, Tel-Stor 684
Telephone bugging 920
Telephone cable. *See* Cable
Telephone equipment, AEI factories for production of 984
broad-band, MEL 161
Telephone exchange, electronic, Ambergate 1056, 1088
Pentex system 1056, 1088
private automatic (trade publication) 650
with visual display, PABX4 921
Telephone installation statistics 984
Telephone kiosk of new design 187. *Letter* 272
Telephone tapping 920
Teleprinter, Motorola 944
Telescope(s) on Moon, photometer to determine practicability of 1064
Telescope axis encoder, Theta 1029
Television
BBC-2 relay stations 230
closed circuit, ACEC 579
colour, cathode ray tubes for, RCA 273
International Radio Consultative Committee on 187
production preparation, Baird 446
test equipment, Philips 533
transmission system for 789
pocket, Microvision 395
Seastar closed-circuit, in *Spero* cargo ship 398
thirty years of 835
Television advertising, small control gear, AEI 783
Television broadcasting equipment (trade publication) 382
Television camera, colour, Marconi Mark VII 1087
remote control, H. C. J. Tarner 884
transistorized, GEC 533
Television masts, cylindrical 832
Television monitoring equipment, Add-a-Vision 988
Television picture monitors (trade publication) 470
Television set production, Baird 446
Television Society, conference on automatic operation and control of broadcasting equipment 884
Television studios, automatic, D. A. Tilsey 885
Television system, navigational closed circuit, Seastar II 417
Television translator, sun-powered 966
Tel-Stor telephone answering and recording machines 684
Temperature control(s) and indicators in cargo ships 1014
cold room 371
Temperature control valve, dual relay, MIL 424
Temperature controller, for up to 1 kW, Kent Precision Electronics Ltd. 26
four-channel 70
laboratory furnace, Ether 1073
trade publication 818
Temperature determination in cooled turbine blades 1070
Temperature indicating controller, Barber Colman 907
Temperature measurement, of ultra-centrifuge rotor 763
tyre, pyrometer for 74
see also Pyrometer; Thermocouple; Thermometer
Temperature recording decalcomania, Temp-Plate 248
Tempest batch basket centrifuge 31
Tempest mobile cleaner 1144
Templewood Hawksley Ltd., Cross Cut sludge lifter for sewage treatment 790
Templugs for piston ring micro-hardness tests 149
Temp-Plate temperature recording decalcomania 248
Tendering for road construction contracts 7
Tennessee Valley Authority, Nickajack Dam project 973
publications 301
Tensator Ltd., brush springs (trade publication) 336
Tension insulator, method of changing 1061
Tercol epoxy bonder (trade publication) 952
Terminal block, Critchley 990
Terminal pin with self-cutting serrations 162
Termi-point wiring machine, English Electric 723
Terphane polyester film 1030
Test(s). *See* under specific type of test and item tested
Test kit, network protector, Westinghouse 686
Testing, materials (trade publication) 1146
Testing instruments (trade publication) 952
Testing machine. *See* under specific type of testing machine
Testing station, vehicle, international (Vienna) 104
Tetron PTFE bridge bearings 717
Textile(s), irradiation of, V. Stannett 204
silicone treatments 343
Textile Machinery Developments Ltd., safety saw benches 854
Textile machinery industry, output and order trends 437
position and prospects 1086
Textile thread breakage detector, dropper switch,

Stoptex 1139
Textron's Bell Aerosystems Co., aluminium tube for force feeding weightless fuel 1023
Bell Rocket Belt rocket-propelled belt 143
Thames Board Mills Ltd., corrugating machine for board 763
Theory of elasticity, by M. Filonenko-Borodich (book) 607
Theory of oscillators, by A. A. Andronov, A. A. Vitt and S. E. Khaikin (book) 37
Theory and practice of time study, by W. C. Glassey (book) 36
Thermal conductivity of uranium dioxide (book) 1077
Thermal delay relay, Photain 376
Thermal efficiency and power production by K. Fenton (book) 171
Thermische Turbomaschinen, Vol. 1, by W. Traupel (book) 649
Thermistor, semiconducting diamond for 1104
with diamond element 205
Thermobloc Multipass air heaters 643
Thermobloc Multipass 550 for painting shop 296
Thermocouple instruments, Multitemp and Unitemp 553
Thermocouple wall chart (trade publication) 470
Thermodynamics
basic engineering, by R. Joel (book) 817
engineering, by D. B. Spalding and E. H. Cole (book) 1111
examples in, by O. G. Boxer (book) 83
IAEA (book) 129
nonequilibrium, in bio-physics by A. Katchalsky and P. F. Curran (book) 213
Thermoelectric devices (trade publication) 864
Thermographic examination of foam insulation 128
Thermometers, platinum resistance, Rosemount 774
Thermophysics specialist conference 428
Thermosen Inc., multiple reed relay 72
Thermostats, testing in house on factory roof 620
Theta Instrument Corp., telescope axis encoder 1029
Thickness measurement, by backscatter gauge 387
by transmission 387
coatings, by radioisotope instruments 388
Thickness measuring instrument, thin-film, Talystep 808
Thienes range of workholding equipment 421
Thin-film thickness measuring instrument, Talystep 808
Thin walled steel structures, symposium on 1036
Thiokol, magnetic perturbation scanning materials testing method 509
30–98 Co. Ltd., Bin-Dex level indication in bins or silos 898
Thomas, B. M., fuel cells in locomotives 797
Thomas, F. G., appointment as deputy director of Building Research Station 267
Thomas, Martin, Ltd., boiler cradles 724
Hi-Way Airportable maintenance tower 403
Thomas 100-station Auto-Sorter collating machine 685
Thomas, Sir Percy, Severn Suspension Bridge 456
Thompson, John, Ltd., orbital pipe weld scanner for tube 33
Thompson, John, Ordnance Co. Ltd., friction welding machines 420
Thompson, John (Wolverhampton), Ltd., welding technique, stainless steel 369
Thompson, P. F., push-button pints 398
Thompson, R. V., fluid switching 287
Thomson, W. T., on Vibration Theory and Application (book) 427
Thor Mark 2 photocopying machine 297, 597
Thorn Electrical Industries, breach of freeze 697
X-ray image retaining panel 45
Thorn Parsons Co. Ltd., flame trap for gas lines 1139
Positor positive temperature coefficient resistors 989
Thornycroft, John I. & Co. Ltd., ferries for Portsmouth–Gosport service 283
merger with Vosper Ltd. 178
plastics ship development 1089
Thorsales Ltd., Thor Mark 2 photocopying machine 297, 597
Thread, screw. *See* Screw thread
Threading machines, FOB 601
3-D scale drawing, by C. K. Clutterbuck (book) 1077
Thring, M. W., model tests on furnace performance 806
Thrust bearing, one-piece cage, INA 333
Thrust meter, Michell Bearings Ltd. 160
Thul, H., cable-stayed bridges 678
Thumb tacks, self-adhesive, Mactac International 461
Thyristor, in railway electrification 794
position and prospects 722
Thyristor control, for electric locomotives 56
for multiple-unit train set 796
FV82, voltage regulator with 333
Thyristor controlled speed control and light dimmer, ADAP 463
Thyristor controlled variable speed drive, Clarke Chapman 425
Thyristor packs, oil cooled, Industrial Electronic Controls 907
Thyristor silicon controlled rectifier 163
TI Stainless Steel Tubes Ltd., Supatube stainless-steel water pipe 647
Tichy, J. H., on Effective Writing for Engineers–Managers–Scientists (book) 649
Ticket machine for Montreal Metro 892
Tidal model of Humber estuary 275
Tidal power schemes proposed in Britain 18
Tidal power social benefits 18
Tidal power station, La Rance. *See* La Rance
TIE (Communications) Ltd., sun-powered television translator 966
Tiger motor car, Sunbeam 801
Tilbury, port development at 917
Tilbury Construction Co. Ltd., Admiralty research laboratories, Slough 145
Tilghman's Ltd., Wheelabrator blast cleaning machine 29
Tilley Lamp Co. Ltd., Gas Wise LP gas floodlight 420
Mini-Flood LP gas floodlight 420
Sitelight LP gas floodlight 420
Tilsey, D. A., automatic television studios 885
Tilting rotor concept for VTOL transports, Westland Aircraft 881
Timatic Mk. 11 time switch control 332
Timber engineering (trade publication) 428
Timber Research and Development Association, timber shell roofs (trade publication) 818
Timber shell roofs (trade publication) 818
Timber Trade Federation, timber engineering (trade publication) 428
Time delay unit, Brookhirst 332
Time study, theory and practice of, by W. C. Glassey (book) 36
Time switch(es) for domestic systems, Venner 73
Time switch control, Timatic Mk. 11 332
Timer, variable ratio percentage, Pentim 162
Times Machinery Co. Ltd., Hestika lathes and automatics 210
Tinplate classifying line, automatic static switching equipment for, SCOW 170
Tipper, Big Chief Triaxle 507
Tipping gears, hydraulic, Edbro 505
Tipping skips, Audax Ltd. 211
Tishler, Max, public image of science and technology 94
Titanium alloy, Hylite-65 331
stress corrosion cracking of 204
Titanium carbide cermets, properties 430
Titration equipment, Titrimeters 328
Titrimeters titration equipment 328
Tobias, S. A., Advances in Machine tool Design and Research (book) 213
Tollbridge Trailers Ltd., mobile gantries 253
Tomey Industries Ltd., Mercoid pressure control 731
Tomkins-Johnson Co., air/hydraulic cylinder limit switches 690
Toms, A. H., soil consolidation press errors 164
Tool(s)
compression, power-operated, BICC-Burndy 379
jigs and, for schools and colleges, by F. L. Dutton (book) 733
power, portable (trade publication) 130
trade publication 256
scribing, Air Scribe 300
small, output and order trends 437
position and prospects 1086
tipped (trade publication) 516
Hofmann 211
Tool grinding machines, Edgwick 123
Tool steel, Cyclone-70 289
Tool Steel Gear & Pinion Co., compression block testing for gear strength determination 461
Tooling, carbide, Kennametal 723
Torch, blow, Supa-Nova 461
gas/air, Production Sales 467
Toronado motor car, Oldsmobile, road test on 1057
Toronto-Dominion Bank Tower 56-storey building, design and construction 844
Toronto-Dominion Centre 844
Torque converter, Ferguson-Teramala 412
Torque tracer, dynamic, for testing Rotenoid rotary solenoids 850
Torquemeter, ASEA 160
Torrington Manufacturing Co. Ltd., blower units (trade publication) 516
fan blades 553
Torsion, by C. F. Kollbrunner and K. Basler (book) 691
Total Oil Products (GB) Ltd., Immingham refinery 278
Touring Superleggera Flying Star I motor car 888
Towards More Creative Science, conference on 4
Tower, suspension. *See* Suspension towers
Towler, F. H., taking the profession seriously 7
Towler Hydraulics, portable oil filter pack 125
transmission unit 157
Town gas, for forge heating 771
natural gas for, Sir Henry Jones on 3
Townson, J. M., demonstration of Euler loads 969
determination of Euler loads 206. *Correction* 286. *Letters* 707, 883, 969
TR-109 voice receiver 417
Trace characterization—chemical and physical, symposium 256
Tracer, dynamic torque, for testing Rotenoid rotary solenoids 850
Track. *See* Trolley and track system
Track condition recording and maintenance system, Neptune 190
Track-Marshall 7S shovel 855
Tractor
Bray Four 10/60, BMC 146
crawler, and bullgrader, International Harvester 1034
D8H, Caterpiller. 855
forward control, County Commercial Cars 638
hydrostatic transmission for 1052
International Harvester 434 with Speed Amplifier 146
Leyland Steer 507
Massey-Ferguson-710 146
remote control of 1052
remote control system for 1065
30 ton gross train weight, Mercedes-Benz 507
turbocharger unit for 774
Tractor accessories and equipment exhibits at Royal Show 146
Tractor exhibits at Royal Show 146
Tractor-mounted borer, dual-purpose, Danuser Digger 858
Tractor-scraper, Clark-Hancock 1075
Tractor shovels, Merton 853
Tractor unit, trailer and, Hy-Spill 506
Tractor wheel conversion, Connolly 1053
Trade associations, and professional bodies of the United Kingdom 733
mechanical engineering, review of 876
Trade exhibition. *See* Exhibition
Trade mission to Latin America iron and steel industry 917
Trade Unions, Royal Commission 827
white-collar, employment charter for 435
see also under names of specific unions
Trades Union Congress, wage control after the freeze, 782
Wilson, H., address to 433
Traffic barrier electrically operated, Machinefabriek 1032
Traffic control system, Helsinki 536
Traffic engineering exhibition(London) 525
Traffic forecasts by RRL. *Letter* 1006
Traffic light(s), improved design plans. *Letters* 7, 398, 573
Traffic light control by proximity detector 276
Traffic map, Colormatic 366
Traffic and Road Networks Engineering Exhibition, International (Imperial College) 578
Traffic sensor, overhead, Marconi 578
Traffic signal unit, Siemens 578
Traffic system, Liverpool, computer-controlled 535
Trailalite, Mark II, mobile floodlight 687
Trailer
and tractor unit, Hy-Spill 506
demountable, Powell Duffryn 147

five wheeled, Youngman 124
120 ton, Crane 422
semi, bulk transporter, Murfitt 506
Challenger T container 507
chassis, Pedigree Plus Straight Frame 505
Scammell I-beam type, TIR bodies for 25
Silverline Boxvan, Scammell-Duramin 507
step-frame, Crane Fruehauf 1143
Trailsteer 505
two-wheeled, for excavator transport, Hamilton 379
Trailsteer semi-trailer 505
Train. *See* Railway train
Training
and management 1045
at Distillers Chemicals & Plastics Ltd. 878
craft, module system of 1045
for skill, trends in, conference on BACIE 1045
general versus specialized 1045
in building industry 527
in foundry industry, recommendations of joint committee 1002
Industrial Exhibition and Symposium (Manchester) 650
lubrication, facilities available 632
need for defined standards in 572
of industrial designers 703
of naval architects 138
of technocrats, Cranfield Society 137
of youth in industry, Volume 1 'Engineering' edited by Sir Robert Nesbitt-Hawes, comment on 50
supervisory, development position and recommendations 139
New Approach to Management 225
welding achievement during, standards of, by F. Clark and J. Twining (book) 37
see also Course; Education, etc.
Training of Supervisors, EITB 346
Training of Training Officers, CTC 225
Training aid in development districts 180
Training centre, Colchester Lathe Co. Ltd. 1003, 1067
group, Paisley 962
Plymouth 1043
Steel, Peech and Tozer 1003
Training grants, for semi-skilled trades 999
in development districts 181
Training officers, reference books for 178
training of, CTC 225
Training Officer's Guide to the Education System in England and Wales, by C. Steers 178
Training programmes, Foundry Industry 570
Training requirements, for electrical manufacturing industry 141
for mechanical manufacturing industry 141
Training schemes, group, information on 481
Training ship, *Engadine*, helicopter operations 534
Tramarance consortium, La Rance power station 19
Transactions of the third international vacuum congress, by H. Adam (book) 427
Transafe trolley for bored products 327
Transatlantic cables, centenary of 312
Transauto car parking accessory 881
Transceiver, aircraft, air/ground, Sky 505 vhf 405
Transducer(s)
load cell/force, Penny and Giles 1107
magnetostriction in 777
materials used for 777
pressure, CIC range 71
medical S.E. Laboratories 690
pressure/resistance analogue 1107
voltage, Ether Engineering 604
Transducer/converter, SE Laboratories 291
Transducer system, magnetostrictive, for ultrasonic cleaning 124
Transfer, mooring and, facilities, Mannesmann-Export 942
Transfer machine, rotary (trade publication) 256
TS500, Steinel 602
Transformer(s)
for Aberthaw B power station 231
for Longannet power station 1017
ignition, Danfoss (London) 773
1,000 MVA, for Penn sub-station 353
power, short circuit strength of, by M. Waters (book) 607
pyroclor-filled (trade publication) 1146
Pyroclor fluid for 1088
trade publication 172
Transformer industry, rationalization 999
Transformer/relay units, John Davis 643
Transformer transport to West Thurrock power station 239
Transistor(s)
dual matched 163
epoxy encapsulated, Mullard 463
for undersea telephone cable 76
high frequency 980
in analogue computers 696
micro, LID 1029
resonant gate, with built-in tuning fork 732
Transistor ignition system, Delco-Remy 543
Transitron Electronics Ltd., LID micro-transistor 1029
Translator, syntax-orientated, by P. Z. Ingerman (book) 427
Translift Ltd., lifting platform 253
Transmission, differential systems. *See* Differential transmission systems
hydrostatic, for tractors 1052
variomatic, in Daf-44 motor car 627
see also Power transmission; Drive; Gear
Transmission gauges 385
for weight or thickness measurement 387
Transmission line work stoppage on, Stella-Cockenzie 1018
Transmission system, hydrostatic 560
Transmission unit, Towler Hydraulics 157
Transmitters, for UHF stations, M. L. Hands 885
Main Station/SSB 158
Transparent ceramic, Yttralox 805
Transport, air. *See* Air; Aircraft; Aviation
freight, White Paper on government policy 226
guided land, conference on (IME) 797, 798
high speed guided, symposium on 1112
land, man-powered, competition 9
Ministry of, annual report 1084
coach maximum length amendment proposal 273
of generating plant 239, 240
railway. *See* Railway(s)
road. *See* Motor car; Motor vehicle; Road
sea. *See* Ship(s); Shipping
Transport coordinating council, activities of 1001
Transport Equipment (Thornycroft) Ltd., Big Ben oilfield truck 506
Nubian Major fire/crash tender 506
Transport integration, White Paper on government policy 226
Transport policy, White Paper on 226
Transporter, cable drum, RM Trailers 1075
semi-trailer, bulk, Murfitt 506
vertical, Verticon 942
Transrice control units 371
Transrol planetary screws 990
Transtainer container handling equipment 926
Trapeznikov, Vadim, on control, economy, technological progress 51
Traupel, W., on Thermische Turbomaschinen, Vol. 1 (book) 649
Trawler/refrigerator ship, Burmeister and Wain 882
Trawsfynydd nuclear power station, siting considerations 670
Treenjaeger Ltd., Mundus hacksawing machines 77
Treforgan Drift Mine, underground radio systems 575
Trelleborgs Gummifabriks AB, neoprene synthetic rubber pipe flashings 331
Trenchard Hall, engineer training at Cranwell College 618
Trend Industrial Equipment Ltd., electric concrete breakers 252
Trent turbofan aircraft engine, Rolls-Royce 491
Triaxle tipper, Big Chief 507
Triboengineering design and practice, need for guide 631
Tribological institutes, proposals for 633
Tribology
committee on 567, 630
constitution of 633
definition of 567
need for training courses 632
use of term 631
Tridax 110 V distribution system 1106
Trident Equipment Ltd., Tridax 110 V distribution system 1106
Trident three-jet civil transport aircraft 445
Trim handling (trade publication) 256
Trimmer potentiometer, Pandect 907
Triple Seal Crown crown cork bottle closure 1123
Triumph GT6 motor car 802
description of 629
Trois-Rivieres Bridge over St. Lawrence River 1100
Trolley, and track system, Audax 254
for Finnflow cargo-handling system, Duramin Ltd. 1102
Transafe, for bored products 327
Trotman, R. E., on Longitudinal Space-Charge Waves (book) 427
Trox Bros. Ltd., airtight and sound resistant steel doors 648
external aluminium louvres 425
Truck(s), motor, Loadstar 507
oilfield, Big Ben 506
see also Bogie; Motor vehicle; Fork-lift truck
Truck chassis, Bedford KM range of 505
Truesdell, C., Continuum Mechanics (book) 775
Trumeter Co. Ltd., bottle counter 862
land and road measuring machines 579
Trunking, Hi-duct (trade publication) 952
Trusses, roof (trade publication) 172
Tselikov, A. I., on Rolling Mills (book) 951
TSR-2, murder of, by S. Hastings (book) 951
Tube(s), alumina, Purox 991
aluminium for force feeding weightless fuel 1023
orbital pipe weld scanner for 33
see also Pipe
Tube cutter, Imp miniature 167
Tube cutting machine, Bimax 465
Tube fittings (trade publication) 818
Tube Investments Ltd., Hi-duct trunking (trade publication) 952
Tubes Ltd., exhibits at Fluid Power Exhibition 560
Hiab lorry loading equipment 556
tubular forgings (trade publication) 734
Tubing
and tube accessories, Van Leeuwen Buizen 940
and tubular components, Accles and Pollock 404
helically wound, Metsec 461
steel, plastic-covered, Spiral 1107
trade publication 214
Tubular forgings (trade publication) 734
Tucker, D. G., on Applied Underwater Acoustics (book) 381
Tufts Cove power station, roof insulation 246
Tug, *Danube VIII*, collision of 835
Tuned circuits, use of resonant gate transistor 732
Tunnel
Blackwall, deck design for second 788
Channel, position and prospects of 782. *Letter* 922
Coen, road crossing for North Sea Canal, Amsterdam 10
Mersey, alarm system for 230
Severn, steam pumping plant. *Letter* 1051
Tunnel construction for Montreal Metro 891
Tunnel scheme, Woodhead, for supergrid power lines 1124
Turberville, D. W., industrial market research 487
Turbine(s)
bulb, development of 18
gas, aircraft engine, committee to coordinate policy 436
combined with diesel, CODAG and CODOG 762
combined with nuclear power, CONAG 762
combined with steam, COSAG 762
conference, ASME 864
COSAG system for Type 82 destroyer 661
for multiple-unit passenger trains, Rolls-Royce 828
generator, Olympus, for Netherlands 705
generator, silencing 938
motor vehicle propulsion, GM 929
natural gas as fuel for 704
Olympus marine developments 760
theory and design of, by W. Traupel (book) 649
see also Aircraft engine
hydraulic, vibration in, IME 130
steam, COSAG system for Type 82 destroyer 661
reaction, Stal Laval Lungström 498
660 MW generator sets 67
theory and design of, by W. Traupel (book) 649
see also Generator
Turbine automatic control equipment systems 534
Turbine blade(s), analysing vibrations of 1065
thermal stresses in 1070
Turbine blade temperature, computer program for 1070
Turbo drill for North Sea explorations 228
Turbocharger(s) for Götaverken diesel engines 1054
Turbocharger unit for tractors 774
Turbo-Cruiser gas-turbine bus 929
Turbo-jet dishwasher 967

Turbomeca, Adour RB172/T260 supersonic turbofan aircraft engine 491
Turbro-Titan III motor truck 929
Turbro Twin fan 511
Turbrocent range centrifugal fans 290
Turbulence amplifiers 564
Turin Motor Show, exhibits at 840, 886
Turner & Brown Ltd., fans and ventilators (trade publication) 172
Turbro Twin fan 511
Turbrocent range centrifugal fans 290
Turner, S. R., BACIE conference 1045
Turners Asbestos Cement Co. Ltd., Everite asbestos cement pressure pipe 856
Turnstile for limited spaces 1143
Turpin, F. B., on District Heating (book) 775
Twin Industries Agencies Ltd., Fulton range of steam boilers 80
Twining, J., on Standards of Welding Achievement during training (book) 37
Twinstat power controllers 729
Typical microstructures of cast metals, by G. Lambert (book) 607
Tyre(s) in safe motoring (trade publication) 428
rubber, for Montreal Metro 889
Tyre temperature measurement, pyrometer for 74

U

Ucan Organization, Klip-lok electrical conduit clip 862
Udal, J. P., Ltd., Festo-Pneumatic strip feed for presses 464
press feeds (trade publication) 84
UK-3 experimental satellite, GEC 405
UK-3 satellite, compatibility tests in United States 1008
UK-3 satellite balancing tests 599
Ultra-centrifuge rotor, temperature measurement of 763
Ultra Electronics (Components) Ltd., sub-miniature connectors 70
Ultra Electronics Ltd., engine control system for BS593 Olympus engine powering Concorde supersonic airliner 405
sonic aid for guiding blind persons 484
Ultrasonic beam switch for merry-go-round railway trains 763
Ultrasonic cleaning, magnetostrictive transducer system for 124
Ultrasonic cleaning equipment 378
Ultrasonic flaw detector 379
Ultrasonic Machines Ltd., ultrasonic vehicle washer 187
Ultrasonic plate testing equipment, BR7 Wells-Krautkramer 556
Ultrasonic stitchbonder for semiconductor manufacture 166
Ultrasonic test equipment 380
Ultrasonic testing, by J. Krautkrämer & H. Krautkrämer (book) 1077
of tube 641
Ultrasonic vehicle washer 187
Ultrasonic welding of plastics 850
Ultra-violet emitter and magnifier, Uviscope-II 417
Underground radio systems for collieries 575
Underground railway. *See* London Transport Executive; Railway(s)
Underpass, Five Ways, Birmingham 508
Understanding graphs, by S. A. Knight (book) 775
Underwater acoustics, applied, by D. G. Tucker and B. K. Gazey (book) 381
Underwater Activities, International Conference on 130
Underwater ejection system in Gannet aircraft, Westlands 787
Underwater & Marine Development Ltd., inflatable catamaran 144
Underwater & Marine Operations Ltd., SURV underwater research vessel 274
Underwater pipeline to Isle of Wight, Southern Gas Board 155
Underwater research vessel, SURV 274
Underwater vacuum cleaner, Unit Swimming Pools 300
Unemployment, due to credit squeeze 345
see also Employment; Labour; Manpower
Unemployment statistics 739, 958
Ungsbolaget fuel-fired walking-beam furnaces 859
Unicam Instruments Ltd., industrial design activities 715
Unicut saw sharpening machine 380
trade publication 84
Uni-digger potato harvester 1053
Uniform Costing Scheme for metal finishing 1065
Unilast joint sealants 290
Unimatic Engineers Ltd., bifilar stepping motor 985
Union, trade. *See* Trade union
Union Carbide Corp., acetylene production plant 61
fuel cells for vehicle propulsion 928
Union Carbide Ltd., laser ruby 729
systems motor 1073
Union Syndicale des Industries Aeronautiques et Spatiales, aeronautical and space equipment (trade publication) 336
Uniprint Module counting and control devices 906
Uniprint Platen counting and control devices 906
Unit Swimming Pools Ltd., underwater vacuum cleaner 300
United Kingdom Atomic Energy Authority
J. B. Adams appointment to 348
advanced gas cooled reactor 533
annual report 655
elastomer sheet or film production process 205
gas-cooled nuclear reactor for Dungeness B nuclear power station 656
nuclear fuel for South Africa 534
pay load for astronomical satellite 314
pvc pressure suits 457
recovery and handling of irradiated fuels 550
steam generating heavy water reactor 533
symposium on 84
United Kingdom Automation Council, symposium on numerical control of production processes 516
United Kingdom Glycerine Producers' Association, glycerine (trade publication) 1036
United Nations Food & Agriculture Organization, report on world food shortage 740
United States, conference on marketing (London) 1146
Lunar achievements 880
motor vehicle safety requirements 1007
small business encouragement in 1043
see also American
United States aircraft industry, effect of Vietnam war 1002
United States Atomic Energy Commission, wood-plastic research 550
United States Highway Research Board, concrete aggregate properties effect on strength 717
corrosion of steel in concrete 850
weighing of motor vehicles in motion 803
United States National Bureau of Standards
cooling device for semiconductor devices 246
determining molecular bond distances 681
fire resistance of doors 457
light from exploding wire 75
linear particle accelerator at Gaithersburg laboratories 1019
NBSR high-flux materials reactor 716
peak voltage comparison instruments 551
porcelain enamel alkali resistance test 285
preserving microfilm records 370
smoke density values of building materials 204
super-conducting ceramic semiconductors 28
super-conductor material 509
United States Navy, laser gyro 804
United States Navy Marine Engineering Laboratory, superconductor material 509
United States Office of Saline Water, desalination plant 550
United States Steel International (New York) Inc., Tagus bridge, Lisbon 276
United Steel Cos. Ltd., vacuum degassing plant for plate steels 983
United Water Softeners, water demineralizing plant for Sicily 103
Unitemp thermocouple instruments 553
Univac, portable sludge pump, UVC4 468
Univac 1107 computer, Computer Services (Birmingham) Ltd. 150
Universal Document Transport, ICT, document reading machine 328
Universal joints (trade publication) 776
Universal Metal Sprayers Ltd., manufacturing services (trade publication) 692
University(ies), collaboration with industry, conference on 52
see also under names of specific universities
University Choice, comment on book 220
University College, London, fluidization research 204
University forward level research and researcher training functions 53
Unloader, KAM Double D 1053
Upson, A. R., on Synchro Engineering Handbook (book) 171
Upstone, T. J., ropes for cable-stayed bridges 678
Uranium carbide, cutting, diamond blades for 1025
Uranium dioxide, thermal conductivity of (book) 1077
Uranium sources 675
Urethane foam for industrial insulation 246
Urethane foam insulation, rigid Daltolac 60 and Suprasec DN 370
Urethane rubbers (trade publication) 994
Urquhart's (1926) Ltd., air heaters (trade publication) 84
Urwick, Orr & Partners, skills analysis 182
Urwin, B. E., Conqueror class cargo ship 744
US 45 multi-turn precision dials 463
US Industries Inc., power presses for motor industry 882
Use of plutonium for power production (book) 515
USI Engineering Ltd., air knife 945
Utility Kart battery vehicle 54
Utility Lamp & Fittings Co. Ltd., lighting for hazardous conditions (trade publication) 470
Uviscope II ultra-violet emitter and magnifier 417

V

V-belts (trade publication) 172
Vac-U-Max Ltd., pneumatic hopper feeder 514
Vacuum, high voltage insulation in, symposium on 952
Vacuum cleaner. *See* Cleaner
Vacuum congress, third international, transactions of, by H. Adam (book) 427
Vacuum degassing plant for plate steels 983
Vacuum deposition, basic processes 609
definition 609
Engineering Outline 609
organic films 612
Vacuum evaporation, applications 610
details of process 609
materials evaporated 610
Vacuum feed-through collar and microcircuit jig 730
Vacuum flask casings, production of 939
Vacuum furnace, VIA-VAC F.A.(B)N.C. 33
Vacuum Generators Ltd., feedthroughs, linear and rotary motion 425
Vacuum handbook, Leybold, by K. Dieis and R. Jackel (book) 649
Vacuum hose making machine 601
Vacuum Industrial Applications Ltd., VIA-VAC F.A.(B)N.C. vacuum furnace 33
Vacuum metallization of plastics 1026
Vacuum pump. *See* Pump
Vacuum tube diode, microscopic 805
Vale, E., on Harveys of Hale (book) 649
Vallvik fractionator for pulping process 496
Valmet Oy, *Finnhansa* and *Finnpartner* roll-on/roll-off ships 1102
Valve(s)
air operated (trade publication) 864
ball, in fluidics 565
McCannaflo 1028
check, stainless steel, Normalair 250
Continental Hydraulics range of 560
diaphragm, in fluidics 565
diaphragm operated, Baldwin 463
directional hydraulic, Brown and Sharpe 558
for power transmission line to Sardinia, ASEA 1097
four-way, Maxam 1133
hydraulic, Circuitstack sandwich assembly 121
Hymatic 406
miniature hydraulic, Vickers 861
Mitral, and ginger joint 745
Nederlandsche Dok en Scheepsbouw Maatschappij NV 942
¼ in. bore, thumb-button operated, Baldwin 690
order position and prospects 1086
output and order trends 438
reducing, Midland Industries Ltd. 73
trade publication 470
safety, high lift 26
series, for high-voltage dc power transmission 583
solenoid, three-way, Dewrance Controls 948
two-way, Dewrance 426
spool, in fluidics 565

temperature control, dual relay, MIL 424
water, thermostatic, Danfoss 207
see also Microvalve
Valve actuator, electric, Zero Four 1073
Valve control unit, EH1, Rotork 552
Valve developments for high-voltage dc power transmission 548
Van Dalen, K., continuous composite beams 677
Van de Graaff particle accelerator 471
Vandenberg, J. D., procedures manuals 221
Vandyke Machine Tools Ltd., cable ladder system (trade publication) 562, 1112
Vanguard airliner delays, BEA 94
Van Leeuwen Buizen, tubing and tube accessories 940
Vantrunk' cable ladder system (trade publication) 1112
Van Voorden Zaltbommel NV, Hydena central gear 940
purse and trawl winch 940
Vapour deposition, by C. F. Powell, J. H. Oxley and J. M. Blocher (book) 515
for plastics 1026
Varatio-Strateline Gears Ltd., gear units for electrostatic precipitators 374
Varian Associates, manufacturing activities in UK 1122
Variational methods for eigenvalue problems, by S. H. Gould (book) 469
Vari-feed system in hobbing machines, Perkins 682
Variomatic transmission in Daf-44 motor car 627
Variplotter 1131 plotting instrument 467
Varotal zoom lenses 533
Vauxhall Boiler Co. Ltd., boilers (trade publication) 516
Vauxhall Motors Ltd., Bedford KM range of truck chassis 505
induction heating equipment 724
Viva motor car 802
restyled versions 541
VC10 airliner revenue analysis 745
VC10 jet transport aircraft 443
VEB Industriewerk Halle-Nord, GMG 2-70 universal loader 468
motor grader 252
Veedip Ltd., elastomer sheet or film production process 205
Vehicle testing station, international (Vienna) 104
Velocone range of cylone dust separators (trade publication) 734
Vending machines, coin lock-out relay for, Key-switch 906
coinless dispenser and refrigerator, Bell Captain 880
Venner Group, digital counter frequency measuring equipment 403
Venner Ltd., automatic car park equipment 855
time switches for domestic systems 73
Ventilation. of Birmingham New Street station 880–881
see also Heating and ventilating
Ventilation system employing Coanda effect, Olin 987
Ventilators, fans and (trade publication) 172
Verdict Gauge (Sales) Ltd., dial test indicator (trade publication) 776
Vernistat ac potentiometers (trade publication) 1036
Vero Electronics Ltd., Alton instrument cases 606
Botley range of multiple instrument cases 512
remote control system for tractors 1065
terminal pin with self-cutting serrations 162
Vero Machine Tool Co. Ltd., fast work changing equipment 979
Vero Precision Engineering Ltd., milling machine for keyways on turbine diaphragm 764
Versatil copying machine 597
Verticon vertical transporter 942
'Vertomat' four station rotary transfer machine (trade publication) 256
Vesteroy bulk carrier, diesel engine installation 1054
Vetrano, J. B., superconducting cable 718
Viaduct, motorway, Gateshead 311
Wye, *See* Wye Viaduct
see also Bridge
VIA-VAC F.A.(B)N.C. vacuum furnace 33
Vibra Screw bin activators and feeders for difficult materials 939
Vibrajet spray nozzle for herbicides 792
Vibration, bridge, and pedestrians, RRL 787
dynamics of, by E. Volterra and E. C. Zachmonoglou (book) 213
in hydraulic pumps and turbines, IME 130
turbine blades, analysing of 1065
Vibration monitor, electronic, Plessey 406
Vibration platform, mounting for, Minsk concrete works 600
Vibration theory and application, by W. T. Thomson (book) 427
Vibrator, immersion, compressed-air driven, Burflex 379
industrial, for materials handling 78
Vibratory hoppers, electromagnetic 168
Vickers-Armstrongs (Shipbuilding) Ltd., merger announcement 49
Vickers Ltd., cargo ship *Priam* 1011
container trailer system 926
formation of Paceo-Vickers Ltd., 725
metric imperial translating drum dual-reading machine tool dial 814
power presses for motor industry 882
Vickers (Shipbuilding Group) Ltd., Polaris submarine, *Resolution* 534
Vickers Sperry Rand Ltd., miniature hydraulic valve 861
Orbital piston hydraulic pump 404
servo motor package 558
Victor B Mk 2 strategic reconnaissance aircraft 63
Victoria Line. *See* London Transport Executive
Video tape machine to diagnose machine breakdowns 1134
Video telephone. *See* Telephone
Vidor Ltd., battery factory for Bulgaria 1136
Viewer, slide, portable, Super-66 833
Villari effect 777
Viners, mechanization of cutlery production 294
Vinyl hand-grips, Vygrips 605
Viper 600 turbojet aircraft engine 354
Viswanathan, K. S., on The Many-Electron Problem (book) 775
Vitreous enamels, improvement of, Meerschaum 682
Vitrified-clay drainage pipes, plastic couplings for 121
Vitt, A. A., on Theory of Oscillators (book) 37
Viva. *See* Vauxhall
VK Air Systems Ltd., compressed air nozzles 1024
V/O Sudoimport, trawler/refrigerator ship 882
Vogl, T. P., on Recent Advances in Optimization Techniques (book) 427
Vogue, Singer, motor car 754
Voice receiver, TR-109 417
Voith Schneider bow propeller for *Aberthaw Fisher* shallow-draught vessel 231
Vojtech, O., on Organic Coolants and Moderators (book) 733
Volgograd-Donbass power transmission scheme 583
Volkerak dam, Netherlands Delta Plan 117
Volkerak shipping locks, Netherlands Delta Plan 116
Volkswagon, exhibits at Commerical Motor Show 580
1500 motor car 665
Voltage regulators, power supplies and (trade publication) 382
with thyristor control, FV82 333
Voltage transducers, Ether Engineering 604
Volterra, E., on Dynamics of Vibrations (book) 213
Voltmeters, digital, Sercel 291
electronic (trade publication) 1146
Type TF 2604, Marconi 463
Volvo, exhibits at Paris Automobile Salon 664
Volvo-144 motor car 754
Voorwarts NV Engineering Co., refrigerated containers 942
Vortex amplifiers 565
Vosper Ltd., destroyers for Iranian Navy 762
electro-hydraulic steering gear 158
merger with John I. Throneycroft Ltd. 178
Vosper Thorneycroft Group, functions of 178
Vulkofix abrasive disc backing plate 72
Vygrips vinyl hand-grips 605
Vylastic RS60 pvc 688

W

Wage(s) and prices freeze 957
Wage claims and Part IV of Prices and Incomes Bill 613
Wage control after the freeze, TUC views 782
Wagon(s)
bogie, 100 tons capacity 1066
Cartic, for motor car rail delivery 144
hopper, for coal supply trains 416
railway, cushioned coupling device for, Freight Master 1024
work, in aluminium alloy 1143
Wain-Roy 300 excavator-loader 900
Waivers, M. Mendoza 680
Waldrich-Siegen roll grinding machines 123
Walker Crosweller Co. Ltd., air freight export containers 788
Walker, G. E., on Mechanics of Machines (Vol. 2) (book) 213
Walker, James, & Co. Ltd., bellows (trade publication) 864
Walker, Johnny, Racing, JW4 Formula-4 racing car 358
Walker, W. F., on Engineering Productivity (Vol. 2) (book) 83
Walking-beam furnaces, fuel-fired, Ungsbolaget 859
Wall, J., deputy chairman Post Office Board 698
Wallace, G. A., Euston main line electrification 795
Waller, George, & Son Ltd., oil-free compressor 378
Wallingford Hydraulics Research Station, ore terminal at Port Talbot 354
Walmsleys (Bury) Ltd., papermaking machinery for Wiggins Teape, Fort William 497
Walsh, M. J., on Artificial Intelligence through Simulated Evolution (book) 909
Walters, R., computers in construction industry 527
Walton, H. T., traffic lights 573
Wang, P. C., on Numerical and Matrix Methods in Structural Mechanics (book) 255
Wanson Co. Ltd., spray painting shop, BR Shildon 296
Thermobloc Multipass air heaters 643
War, scientists and, by Sir Solly Zuckerman (book) 301
Warder, S. B., Euston main line electrification 795
Gold Medal 658
railway electrification in 20th Century 793
Wargonin concrete additive 813
Wargons AB, Wargonin concrete additive 813
Warm air curtain (trade publication) 776
Warmaire oil-fired central heating system 351
Warner SF400 electro-sheave clutch for refrigerated motor vehicles 897–898
Warren, T. R., Grafham Water Scheme 355
Warrington, proposals for expansion of 309
Warwick Pump & Engineering Ltd., Spitfire 7 self-priming pumps 906
Warwick University, sandwich scholarship 95
Washing machine
automatic, Bendix LT and LA 198
comparison of types 196
Hotpoint-1501 202
Keymatic-3226 197
Liberator-4027 201
Parnall-701 200
domestic, development and statistics 196
twin-tub 196
Supermatic, Hotpoint 703
Washing plant, drum, Armstrong 513
Waste and sewage, Pegpak chokeless packaged pump for 767
Waste material from mines, research into uses for 850
Waste materials handling equipment, containerized, Dumpster, Dinosaur and Dumpmaster systems 506
Wastewater and water engineering Vol. 1, by G. M. Fair, J. C. Geyer and D. A. Okun (book) 691
Water
and oil industries, symposium on 214
and soil conservation engineering, by G. O. Schwab, R. K. Frevert, T. W. Edminster and K. K. Barnes (book) 515
and wastewater engineering Vol. 1 by G. M. Fair, J. C. Geyer and D. A. Okun (book) 691
cards for testing potability of 920
conservation and reclamation of, symposium on 382
desalination of, Russia 1105
fresh, from sea water, ADLRI 189
hot, Angelery generator 768
ion exchange demineralising of 103
ion exchange softening of 103
sea. *See* Sea water

Water conditioner for marine plant 160
Water deionisers, Culligan 1074
Water demineralising plant for Sicily 103
Water desalination, nuclear power for 675
Water evaporation control, reservoir 326
Water main coating (trade publication) 734
Water monitor, fire-fighting, portable trailer-mounted 980
Water pipes, stainless steel 442
Supatube 647
Water pressure booster, Megator 1033
Water pump motor, cooling, noise from 640
Water purifier, Aqua-1 1074
Water Research Association, conference on Desalination as Water Supply Source 624
Water resources, of Great Ouse Basin 280
of underground strata 282
Water Resources Board, annual report 1117
report by 180
South East England water supply position (report) 279
Water softeners, Aqua-Senoor 1074
Water supply(ies), future plans for 180
plants and 247
South East England, report on 279
surface storage projects 282
Water supply source, desalination as, conference on 624
Water-supply training board 393
Water Treatment, Effluent and, Exhibition and Convention 84, 1036
to raise pH, Ricrosene-7 1071
Waters, M., on Short Circuit Strength of Power Transformers (book) 607
Waterworks Association, British, stainless steel water pipes 442
Watford Electric & Manufacturing Co. Ltd., Hi-Break fuse switch 1140
Watson, Robert, & Co., car park (trade publication) 428
Watson, W., & Sons Ltd., Microsystem-70 modular microscope 860
Waves, longitudinal space-charge, by R. E. Trotman (book) 427
Wayne Kerr Co. Ltd., Compact component bridge 27
instruments (trade publication) 1146
Weapon, anti-tank, Blowpipe, Short Bros. and Harland 492
Weapon system, ET 316 low-level anti-aircraft 188
Weast, R. C., on Handbook of Chemistry and Physics (book) 1111
Weather chart recorders, Mufax 159
Weather pattern observations by ATS-1 satellite 1118
Weather Service, Swedish Military, Marconi Myriad computers use in 484
Weatherill, B., small business in US 1043
Weatherill, F. E., Ltd., hydraulic loading shovel 944
Weathershield warm air curtain (trade publication) 776
Weatherstation meteorological kit 1051
Webslight Ltd., self adhesive plastics signs and labels 989
Weck, R., communicating results of research and development, symposium 614
Wedco Conveyors Ltd., mechanical handling (trade publication) 562
Weed control, on railway tracks, Fison Pest Control 1020–1022
trade publication 734
Weed control application and costs, Fisons Pest Control 1020–1022
Weed killer, Weedex 1020–1022
Weed killing contracts, BR 1022
Weedex weed killer 1020–1022
Weedon, B. W., market research, 263
Weelde, Paul and Van, NV, Multiload aluminium containers 940
Weighbridge(s), load cell, Avery 241
Weighbridge machines, Weyrite, for road traffic 642
Weighcell load-measuring device 861
Weighing, load cell (trade publication) 776
of motor vehicles in motion 803
Weighing machine, dormant, Ashworth 497
Weighing system, automatic mixing and, at Bugbrooke Mill 1066
Weighload Ltd., Weighcell load-measuring device 861
Weight measurement by transmission 387
Weights and Measures Regulations 241
Weir, G. & J. Ltd., Esso Lubrication Service 636
Weir Industrial Controls Ltd., solid-state control for induction heating 1104
Weir Westgarth Ltd., desalination equipment 634
Welbourn, D. B., Science Research Council grant to 179
Welconstruct Co. Ltd., steel shelving with hinged or sliding doors 1144
Weld defects, conference on 910
Weld monitor, integrating 768
Weld scanner, orbital pipe, for tube 33
Welding
aluminium (trade publication) 864
and cutting equipment, Saffire-3 602
arc, manual, semi-automatic and automatic, by E. Flintham (book) 993
Argonarc, of heating elements 29
heat controlled, Cooper Electroheat 509
metal inert gas (MIG), of aluminium 36
of high-strength steel, Westinghouse 717
pulse arc, of aluminium 36
of aluminium barrels 852
tungsten inert gas (TIG), of aluminium 36
ultrasonic, of plastics 850
Welding achievement during training, standards of, by F. Clark and J. Twining (book) 37
Welding Construction Co. Ltd., Sortrac III automatic sorting conveyor 945
Welding equipment, arc, portable, Fararc IV Mark-2 602
Welding Exhibition, International (1967) 38
Welding gun, spot, hand-held, S.10, Portable Welders 462
Welding handbook, by A. L. Phillips (book) 951
Welding helmet, glass-fibre, Murex 858
Welding machine, electric arc, Port-el-ette 467
friction, Thompson 420
hf pipe, Thermatool 297
stud, Cromp-Arc-500 166
Welding plant, Listomac 856
with brushless dc tandem generators, Petbow 329
Welding positioner, RT 200, Interlas 426
Welding screen (trade publication) 734
Welding technique, stainless steel, Rollo-Hardy 369
Welding unit, Magna 856
Wellman Controls Ltd., Plan 6 pneumatic cylinders 642
Wellman Incandescent Co. Ltd., Lee Wilson open-coil annealing plant 1109
Wellman Steelworks Engineering Ltd., oxygen steelmaking plant (trade publication) 1036
Wells-Krautkramer Ltd., ultrasonic plate testing equipment 556
ultrasonic test equipment 380
Wells, L. de L., London Fire Brigade 366
Wells, R., on Silicon and Germanium Power Rectifier Technology (book) 649
Wellworthy Ltd., Cawston linkage system for piston data transmission 149
diesel-engine component laboratory 148
piston ring blowby rate indicator 149
Welsh Metal Industries Ltd., GKN Model E spark-erosion machine 859
Welvic high-softening-piont polyvinyl coating materials 813
Welwyn, versatile bungalow at 789
Werkstoffprufung mit Ultraschall, by J. Krautkrämer and H. Krautkrämer (book) 1077
Wessex Industries (Poole) Ltd., battery operated mail delivery vehicle 229
Wessex Machine Tools Ltd., sawing machine for billets 1142
West, J., BACIE conference 1045
West Midlands Gas Board, change from carbonization to gas-from-oil plants 661
West Thurrock power station, thermal efficiency 236
transformer transport to 239
Westbrook, R. C., composite construction 679, 680
Western Avenue extension of A40 road, concrete for 576
Western Electric Co., transistors for undersea telephone cable 76
Western Resources Conference, Colorado 285
Westinghouse Brake & Signal Co. Ltd., driver and controller units (trade publication) 994
railway electrification in Pakistan 56
Westinghouse Defense and Space Centre, extending booms for space antennae 247
Westinghouse, Electric Corp. Telematic Rapid System film storage library for parts records 205
Westinghouse Electric International Co.
audio amplifier 250
cards for testing potability of water 920
magnetostrictive transducer system for ultrasonic cleaning 124
network protector test kit 686
thyristor silicon controlled rectifier 163
welding of high-strength steel 717
Westinghouse Industrial Equipment Division, cavitation meter 371
Westinghouse Research Laboratories, resonant gate transistor with built-in tuning fork 732
Westland Aircraft Ltd.
ferries for Portsmouth-Gosport service 283
propeller shaft power measurement in fishing vessels 639
tilting rotor concept for VTOL transports 881
underwater ejection system in Gannet aircraft 787
WE-01 and WE-02 transport aircraft 881
Westminster Abbey, exhibition of Science, Medicine and Technology 229
900th Anniversary commemoration 38
Westool Ltd., transformers (trade publication) 172
Warner SF400 electro-sheave clutch for refrigerated motor vehicles 897–898
West's (Manchester) Ltd., Manchester abattoir 68
West's Piling & Construction Co. Ltd., piling rig 854
Westwind Turbines Ltd., air-bearing wheel head for surface grinding machine 329
Westwood, Joseph, & Co. Ltd., bridge bearings (trade publication) 734
Weyrite weighbridge machines for road traffic 642
Wheatstone bridge circuit for strain gauge 737
Wheel(s) and pinions, roller-chain, Renold 606
Wheel head, air-bearing, for surface grinding machine, Westwind 329
Wheelabrator blast cleaning machine 29
Wheelburns on rails, effects of 1099
Wheeler, G., supervisory training 139
Wheelslip control in locomotives 979
Wheelwright car park (trade publication) 428
Whetstone, C. N., superconducting cable 718
Whirlpower forced draught burners (trade publication) 428
Whiskers, production and properties 996
White-collar workers, charter for 435
White Fish Authority, propeller shaft power measurement in fishing vessels 639
White, H. E., on Modern College Physics (book) 909
White-line erasing unit, Mighty Mite, for road surfaces, 602
White Paper, decimal coinage 1041
transport policy 226
White-Rodgers Ltd., high-temperature controls 163
Whitehead, W. E., conference of Institute of Directors 874
Whitehouse, George, & Co. (Birmingham) Ltd., electrical conduit of rolled-steel square section 648
Whitehouse Industries Ltd., Philidas self-locking nuts 406
Whitton, R. W., International Road Federation's Man of the year award 525
Whitworth, D., on Basic Digital Computer Concepts (book) 1145
Who owns whom 1966 (book) 381
Wickham, D. & Co. Ltd., Bretby-Wickham Mk 2B underground supplies and salvage vehicle 330
Wickham Engineering Co. Ltd., Mark Va passenger/goods hoist 903
passenger hoists for high aerials 832
Wickham Industrial Equipment Ltd., Tempest mobile cleaner 1144
Wickman Machine Tool Sales Ltd., Heller universal machining centre with numerical control 77
Wiggins Teape, pulp and paper mills, Fort William
architectural treatment 495
bleaching of paper pulp 810
boiler installation 498
chemicals recovery 498
civil and building work 495
control system 498
general description 493. *Correction* 535
labour statistics 494
papermaking machinery 497
power house equipment 498
power house installation 495

pulp and paper processes 496
Wikstroms, Iron Worker shearing machine 210
Wilcox, R., fuel oil for forge heating 771
Wild, A. G., & Co. Ltd., hydraulically powered colliery roof support 209
Pase storage and handling system for use with forklift trucks 464
Powerstor storage and handling system for use with forklift trucks 464
Wild Agricultural Ltd., Uni-digger potato harvester 1053
Wild Barfield Ltd., works visits 172
Wilder, John, Robomatic grain driers 1053
Wilkes, M. V., on Short Introduction to Numerical Analysis (book) 863
Williams, C. E., Loughborough University 99
Williams, E., educating electronic engineers 1085
Williams, J. A., recovery and handling of irradiated fuels 550
Williams, J. A. C., technicians unite 746
Williams, K. R., fuel cells in locomotives 797
Williamson, F. D. and Associated, Aberavon swimming pool 109
Williamson, G. A., Aberavon swimming pool 109
Williamson, H. and D. M., and Sons, Soldermaster electric soldering unit 466
Williamson, James, & Partners, Cruachan pumped storage plant 1018
Longannet power station 1018
Wilson, B. J., on Radiochemical Manual 427
Wilson, H., address to Trades Union Congress 433
BEAMA dinner 959
productivity conference 613
Wilson Line, *Spero* cargo ship, telecommunications on 398
Wiltshire, J. G., award by Institution of Civil Engineers 434
Wimpey, George, & Co. Ltd., asphalt sampling with core drill 1135
Grafham Water reservoir 154
ore terminal at Port Talbot 354
shutter heater panels 397
Winches, electric and hand, Lilleshall-Schiess-Defries 1033
purse and trawl, Hydema 940
Wind loading on cooling towers 401
Wind tunnel, international testing station (Vienna) 104
Wind tunnel testing, low-speed, by A. Pope and J. J. Harper (book) 607
Winder equipment for Wiggins Teape, Fort William 497
Windmill, Chesterton, restoration of 275
Window(s), radiation shielding (trade publication) 1146
Window wipers, wheel-house, Wynstruments 1011
Windscreen wiper unit, TCD intermittent, Lucas 706
Winget Construction Equipment, Squeez-Crete lorry-mounted concrete pump, 638
Winn & Coales Ltd., anti-corrosion service (trade publication) 776
Winrow, R., on Experiments in Production Technology for English Students (book) 1145
Wire, exploding, light from, NBS
pvc-insulated, colour coding machine for 124
Wire netting machine, automatic, Draweba 1110
Wire rope, Dyform, British Ropes Ltd. 972
for dismantling bridge 313
for prestressed concrete, Dyform process for 728. *Correction* 907
helical thimble and protectors for, Cable Covers 774
Wire spools, fibre drum package for 70
Wire stripper and cutting machine (trade publication) 1078
Wire-wool bearing failure 630
Wiredrawing machines, Power-Draw, Automation Ltd. 514
Robertson 252
Wiring machine, Termi-point, English Electric 723
Wisdom, T., on High Performance Driving for You (book) 469
Witter, C. P., caravan stabilizer design 971
WMS (Engineers) Ltd., powder recovery booth 945
Wojtas, B., wheelslip control in locomotives 979
Wolf Electric Tools Ltd., bench grinding machine 32
Wolff Gmbg, drum washing plant 513
Wolff, Rudolf, & Co., London Metal Exchange 530
Wolfson, M., BACIE conference 1045
Wolston TP90 turboprop aircraft engine, Rover 491
Women Engineers and Scientists, International Conference of (Cambridge) 734
Wood-chip digesters, Balfour 811
Wood-plastic research USAEC 550
Woodbridge, A. W., Euston main line electrification 795
Woodhead tunnel scheme for supergrid power lines 1124
Woods of Colchester, ventilation of Birmingham New Street station 880–881
Wool Industry Training Board 225
Woolf, Arthur: the Cornish engineer, by T. R. Harris (book) 1111
Woolman, J., on The Mechanical and Physical Properties of the British Standard En Steels (Vol. 2) (book) 171
Woolwich-Erith project, Balency-system houses for 832
Work, changing equipment, fast 979
Work study methods for electrical work in shipbuilding 616
Work wagon in aluminium alloy 1143
Workington Iron & Steel Co., Massey-Pinchart-Deny hydraulic press brake 420
traffic light control by proximity detector 276
Workshop processes and materials, Vol. I., by J. Schofield (book) 863
World food shortage, report on 740
World Satellite Terminals 933
Worthington-Simpson Ltd., pumps (trade publication) 302
Wozencraft, J. M., on Principles of Communications Engineering (book) 36
Wright, D. L., inertial navigation 92
Wright, J. H., MHD power generation 105
Writing, business report, by E. Sidney (book) 255
effective, for engineers-managers-scientists, by J. H. Tichy (book) 649
technical, and presentation, by W. S. Robertson and W. D. Siddle (book) 863
Writing machines, automatic, Flexowriter 685
Wulff process, acetylene production by 60
Wye, River, Greyfriars Bridge over 360
Wye Viaduct
cantilever principle 503, 504
deck construction 501
design and construction 499
erection procedure 503, 504
tower construction 501
Wykeham Farrance Engineering Ltd., asphalt balance to measure rate of spread 605
Wynne-Edwards, Sir Robert, Building Research Station 594
gas shortages 660
launching of *Project* journal 1
school science conference 5
Wynstruments, wheel-house window wipers 1011

X

X-ray(s), and their applications, by J. G. Brown (book) 817
in radioisotope instruments 384
X-ray diffractometers, Elliott ARCH 9000 computer to control 29
X-ray exmination of pyramids 128
X-ray fluorescence spectrometry 385, 389
X-ray image converter 45
X-ray image intensifier 45
X-ray image retaining panel, Thorn 45
X-ray inspection system, Faxitron-804 988
X-ray microanalyzer 824
X-ray projection microscope 824
Xeroduplicator copying machine 685

Y

Y-cone powder blending machines, Apex 513
Yacht, land, aluminium 104
Yale & Towne Inc., wheeled loader 637
Yanmar Diesel Engine Co. Ltd., type LM65Y marine diesel engine 643
Yarrow-Admiralty Research Department, geared diesel engines for merchant ship propulsion 1007
Yates, A. H., BACIE annual conference 572
Yenisei, River, lock system on, wheeled steel basin as alternative to 787
Yeomans, K. A., potential talents of scientists and engineers 1051
Yield Hall, Reading, car park and shopping area 1122
Yorcalbro' aluminium bass 158. *Correction* 511
York refrigeration unit 986
York Trailer Co. Ltd., Big Chief Triaxle tipper 507
liquid carbon dioxide refrigeration system 507
sliding bogie 507
Yorkshire Imperial Metals Ltd., fresh water and lubricating-oil coolers 941
Kunifer-10 sea-water circulating pipe 158. *Correction* 511
Yorcalbro' aluminium brass 158
Young Chemical Engineering Ltd., Aqua 1 water purifier 1074
Aqua-Sensor water softeners 1074
water deionisers 1074
Young, F. J., on Electromagnetodynamics of Fluids (book) 817
Young, T. R., precision length measurement 246
Youngman Fork Trucks Ltd., Lidder fork-lift truck 1142
Youngman, W. C. Ltd., five wheeled trailer 124
Fourway Silver-Rung adjustable ladder 468
Jumping Jack earth compactor 79
Yttrabox transparent ceramic 805

Z

Zabrodsky, S. S., on Hydrodynamics and Heat Transfer in Fluidized Beds (book) 1077
Zachmanoglou, E. C., on Dynamics of Vibrations (book) 213
ZEEP nuclear reactor, start-up of 101
Zener diodes, Semiconductorkit 803
Zecon 1139
Zenith Carburetter Co., Duplex exhaust emission control system 660
Zenith-GE 'pilot-tone' technique for stereophonic broadcasting 193, 230
Zero Defects Campaign, Rank Taylor Hobson 1051
Zero Four electric valve actuator 1073
Zero-Max Co., variable speed derive 1029
Zienkiewicz, Prof., Clywedog dam 756
Zinc coating *See* Galvanized
Zinc Development Association, zinc plating (trade publication) 650
Zinc plating (trade publication) 650
Zinc production by ISF process, automation of 815
Zinc sulphide electroluminescent material 42
Zoom lenses, Varotal 533
Zuckerman, Sir Solly, deployment of resources for science and technology 782
Scientists and War (book) 301

Printed by Harrison & Sons Ltd., by Appointment to H.M. The Queen, Printers, London, Published by ENGINEERING LTD., 36 Bedford St., London, WC2